Jack Ranch San Luis Obispo Agricultural Cluster Project

Draft Environmental Impact Report

SCH#2016-051012

prepared by

County of San Luis Obispo
Department of Planning and Building
976 Osos Street, Room 300
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Contact: Stephanie Fuhs, Planner

prepared with the assistance of

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January 2018

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Executive Summary

This section summarizes the characteristics of the proposed Jack Ranch San Luis Obispo (SLO) Agricultural Cluster Project, alternatives to the project, as well as environmental impacts, mitigation measures, and residual impacts associated with the project.

Project Synopsis

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Project Description

The Jack Ranch SLO Agricultural Cluster Project consists of a Vesting Tentative Tract Map (Tract 2429) to subdivide a 299-acre property into 13 residential lots as well as a Conditional Use Permit (CUP) to allow for a Major Agricultural Cluster project within the unincorporated portion of the County of San Luis Obispo, approximately 2.5 miles south of the City of San Luis Obispo. The total allowable development area, which would include the proposed residential lots and roadway infrastructure, would be approximately 15 acres (five percent of the gross site area). The proposed residential lots would each be approximately one acre in size and would be clustered in the southern portion of the site. The remainder of the site would include approximately 163 acres of existing and proposed vineyards and approximately 122 acres of natural open space.

The specific location and characteristics of the project are described in greater detail in Section 2.0, *Project Description*.

Alternatives

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

Alternative 1: No Project
Alternative 2: Conventional Subdivision
Alternative 3: Reduced Project

Alternative 1 assumes that the project site will not be subdivided and associated residential development will not occur. Current uses on the project site, consisting of irrigated vineyards and vacant rural land, would remain under this alternative. The land would remain in private ownership, and there would be no easements or restrictions over the property.

Alternative 2 assumes that the project site will be developed under existing County land use categories on the site, without use of the Agricultural Cluster provisions. Approximately 225 acres of the project site are within the Agriculture land use category, with 8.5 acres of prime agricultural land. The remaining 74 acres on the southern portion of the site are within the County's Rural Lands land use category, with 12 acres of non-prime agricultural land and 9.3 acres of prime agricultural land. The entire project site is within the Airport Review (AR) combining designation, and the southern portion of the property is also within the Sensitive Resource Area (SRA) combining designation (Refer to Figure 6).

According to Section 22.04.040 of Title 22, Land Use Ordinance, of the County Code, where a site is divided by one or more land use category boundaries, the site shall be developed in compliance with the requirements of each district, as applicable. Based on the land use categories identified on the project site, under this alternative the site would be developed in compliance with Section 22.22.040, Agriculture Category, and Section 22.22.050, Rural Lands Category, of the County Code. Accordingly, under the Conventional Subdivision Alternative, the project site could potentially be divided into a total of eight lots and developed pursuant to Section 22.30.480 of Title 22 of the County Code, based on the NRCS soil classifications in the Agricultural portion of the property and 20 acre minimum lot size in the Rural Lands portion of the property.

Alternative 3 assumes a reconfiguration of the project to eliminate lots 10 through 13, which would reduce the overall level of agricultural land conversion and impacts to biological resources identified for the project.

The Reduced Project alternative would result in the creation of nine one-acre residential lots to the east of the drainage that intersects the southeastern portion the property. This would avoid any development on the west side of, in, or adjacent to the drainage. This alternative would include vineyard expansions and development of Low Impact Development (LID) features in the same locations as proposed under the proposed project. This alternative would maintain the County-required agricultural buffer of at least 200 feet between the residential lots and the existing and proposed vineyards on the property.

The No Project alternative (Alternative 1) would have the fewest environmental impacts, and would represent the environmentally superior alternative to the project as proposed. However, because this is the "No Project" alternative, CEQA requires that a separate alternative also be identified as the Environmentally Superior Alternative. Additionally, the No Project alternative would not fulfill the intended planning goals for development in the unincorporated areas of the County. The next

most environmentally superior alternative would be the Reduced Project alternative (Alternative 3). This alternative would achieve the clustered agricultural-focused development intended for the property, but would reduce the amount of agricultural land converted to non-agricultural uses and the biological impacts associated with the proposed crossing of the southeastern drainage for access to proposed lots beyond the drainage. There would still be some similar impacts from this alternative, since the development would have to include the private drive at Greystone Place in order to provide access to the parcels. In addition, the drainage improvements, LID features, utilities, and other improvements necessary for the development would also be constructed under this alternative.

The complete alternative analysis is included in Section 6.0, *Alternatives*.

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. An Initial Study and Notice of Preparation (NOP) were distributed for review on April 27, 2016. Through the NOP and Initial Study process, the County of San Luis Obispo determined that there was no substantial evidence that the project would cause or otherwise result in significant environmental effects associated with Population and Housing, or Recreation. Based on responses to the NOP and Initial Study, and scoping discussions among the public, consulting staff, and the County, this EIR addresses the remainder of the environment issue areas included in Appendix G of the *CEQA Guidelines*. The NOP and Initial Study are included in Appendix A of this EIR.

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, Significant but Mitigable: 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, Not Significant: 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.

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 in order 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 development. 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 Class II, Significant but Mitigable, Environmental Impacts

Impact	Mitigation Measure(s)	Residual Impact
Biological Resources		
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.	**BIO-1** **(a) 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. The form shall be submitted to the County Department of Planning and Building to document compliance prior to initiation of construction. **(b) Special Status Plant Species Avoidance and Minimization Measures.** Prior to initial ground disturbance and staging activities in areas of suitable habitat for San Luis Obispo owl's clover and Cambria morning glory, seasonally timed focused surveys shall be completed to confirm results of the prior botanical survey. The surveys shall be floristic in nature and shall be seasonally-timed to coincide with the blooming period of the target species, and shall occur in a year with at least 80 percent of typical rainfall, or during which reference site visits confirm the species can be detected. All plant surveys shall be conducted by a qualified biologist approved by the implementing agency. All special status plant species identified on-site shall be mapped onto a site-specific aerial photograph and topographic map. Surveys shall be conducted in accordance with the most current protocols established by the CDFW, USFWS, and consistent with the County's policies. Survey results shall be submitted to the County Department of Planning and Building prior to initiation of construction. If special-status plant species, specifically, San Luis Obispo owl's clover or Cambria morning glory, are identified within the proposed development footprint, the County Department of Planning and Building will be notified, and an analysis shall be conducted to determine if project impacts would affect more than 10 percent of the population within the BSA. Where direct impacts to special status plants cannot be avoided through redesign of project elements, to compensate for significant impacts on special status plant species, offsite habitat occupied by the affected species shall be preserved and managed in perpetuity at a minimum 1:1 mitigation ratio (at least one plant preserved for each plant affected, and also at least one occupied acre preserved for each occupied acre affected) up to the significance threshold. The threshold is more than 10 percent of the BSA population for CRPR 1B species, and a mitigation and monitoring program	Compliance with Mitigation Measure BIO-1 and all applicable federal, state, and local regulations would reduce impacts to special status plant and animal species to a less than significant level.

Impact	Mitigation Measure(s)	Residual Impact
	will be required. Avoidance of special-status plant occurrences will be the primary mitigation measure. Where direct impacts to special status plants cannot be avoided, to compensate for significant impacts on special status plant species, onsite salvage and restoration shall occur, or offsite habitat occupied by the affected species shall be preserved and managed in perpetuity at a minimum 1:1 mitigation ratio (at least one plant preserved or restored for each plant affected, and also at least one occupied acre preserved or restored for each occupied acre affected). If onsite restoration is selected, then a salvage and relocation program to preserve open space areas on site containing appropriate habitat will be implemented to ensure the long-term survivability of the species. A special status plant mitigation restoration plan will be prepared, if needed, to identify suitable locations, methods, and success criteria for special status plant mitigation through direct seeding and restoration of suitable unoccupied habitat. The plan shall, at a minimum, require replacement through collection of seed and topsoil from impact sites, a monitoring and management component that outlines weed management and monitoring techniques, and success criteria that require successful establishment of the target species over the acreage and numbers of impacted plants within five years. Annual monitoring for at least five years shall be incorporated into the program. The plan shall be submitted to the County Department of Planning and Building for approval prior to issuance of grading permits. Implementation of the plan shall be underway prior to final sign off. Annual reports shall be submitted to the County Department of Planning and Building until success criteria are met. If offsite preservation is selected, areas proposed for preservation and serving as compensatory mitigation for special status plant impacts shall contain verified extant populations of the special status plant species, of similar size and quality, and equal or greater density to the populations that would be impacted by the Project. Preservation of offsite local populations would ensure that although the project could impact some individuals of CRPR 1B, the project would not result in extirpation of these species from the region, and conserved populations would benefit long-term survival of these species statewide. Because populations of annual plants can fluctuate from year to year and are difficult to census over large areas, estimated population of the target species at mitigation sites may vary by up to 10 percent from impacted population estimates, provided calculations are based on population estimates conducted following 2009 CDFW-approved botanical survey protocol. The technical report shall identify a species-by-species accounting of individuals and acreage impacted; locations, acreages, and individuals at each proposed mitigation site; botanical survey dates, personnel, mapping and population estimation techniques used to demonstrate site suitability as mitigation for special status plant impacts. The report shall be submitted to the County Department of Planning and Building prior to issuance of grading permits. Documentation that the preservation effort is complete shall be submitted to the County Department of Planning and Building prior to final sign off. **(c) Native Landscaping.** In order to ensure that project landscaping does not introduce invasive non-native plant species, landscaping materials shall not include non-native invasive species. Drought tolerant, locally native plant species shall be incorporated into landscaping plans. Noxious, invasive, non-native plant species that are recognized on the Federal Noxious Weed List, California Noxious Weeds List, and/or California Invasive Plant Council Inventory shall not be permitted. Prior to installing vegetation and landscaping in common areas such as stormwater basins and LID systems, a landscape plan shall be submitted to the County Department of Planning and Building identifying the plant palettes, including seed mixes, to be used and specifying the prohibition against using invasive species. Prior to buildout of each lot, a plant palette outlining materials proposed for use shall be submitted to the County Department of Planning and Building for	

Impact	Mitigation Measure(s)	Residual Impact

approval, prior to issuance of building permits. The plant palette for lot buildout shall include a statement specifying the prohibition against using invasive species.

(d) Preconstruction Surveys for Nesting Raptors and Birds. The applicant shall ensure the following actions are undertaken to avoid and minimize potential impacts to nesting birds:

To the extent feasible, removal of vegetation within suitable nesting bird habitats will be scheduled to occur in the fall and winter, outside the typical nesting season (typically February through August).

For activities that cannot avoid nesting season, not more than 30 days prior to initiation of construction activities (e.g. mobilization, staging, and Environmentally Sensitive Area (ESA) fence installation) during the breeding season (February 15 to August 31), a qualified biologist shall conduct preconstruction surveys for nesting raptors and other native nesting birds. The survey for the presence of nesting raptors shall cover all areas within the disturbance footprint plus a 500-foot buffer where access can be secured. The survey area for all other nesting bird species shall include the disturbance footprint plus a 300-foot buffer. The surveys shall be repeated during the breeding season for each subsequent year of construction to ensure that ongoing construction activities avoid impacts to nesting birds. Survey reports shall be submitted to the County Department of Planning and Building at least one week prior to initiating construction, and within one week of completing surveys for ongoing activities.

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, and 500 feet for nests of fully protected species (such as white-tailed kite) and raptors. 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. A qualified biologist shall confirm that breeding/nesting is completed and young have fledged the nest prior to removal of the buffer. Encroachment into the buffer shall be conducted at the discretion of the qualified biologist. Nests of fully protected species shall not be removed at any time, even when inactive. Monitoring reports summarizing nest avoidance measures, including buffers, fledge dates, and documentation of the avoidance of fully protected species, if applicable, shall be submitted to the County Department of Planning and Building on a monthly basis while nest buffers are in place or while activities are occurring within the specified buffer of an inactive nest of a fully protected species.

(e) Burrowing Owl Avoidance and Minimization. No more than 30 days before the start of initial ground disturbing activities, a qualified biologist(s) shall conduct focused, pre-construction, take-avoidance surveys for burrowing owls within all areas proposed for ground disturbance that contain suitable owl habitat (CDFW 2012). Preconstruction surveys shall be consistent with CDFW-recommended methods described in the Staff Report on Burrowing Owl Mitigation (CDFW 2012), and be conducted on foot such that 100% of the survey area is visible, and shall cover the entire limits of disturbances plus a 500-foot buffer. If the project is developed in phases, the preconstruction surveys shall be timed to coincide with the start of each phase, rather than the entire site being surveyed at one time. All observations of burrowing owl and sign of burrowing owl (including suitable burrows, pellets, whitewash) shall be mapped on a site-specific aerial image. A report of the survey finds shall be submitted to the County Department of Planning and Building prior to initiation of construction activities.

Impact	Mitigation Measure(s)	Residual Impact
	If no suitable burrows are found, a final take avoidance survey shall be completed within 48 hours prior to initiation of ground disturbing activities. If suitable burrows for burrowing owls are found during preconstruction surveys on the project site; burrowing owl occupancy shall be determined through up to three additional focused surveys on potential burrows during the morning and/or evening survey windows as defined in the *Staff Report on Burrowing Owl Mitigation* (CDFW 2012). If the burrows are determined to be unoccupied, they shall be hand excavated by a qualified biologist. If the presence of burrowing owls is confirmed, the following avoidance measures shall be implemented. 1. Occupied burrows shall not be disturbed during the nesting season (typically February through August) unless a qualified biologist verifies, through noninvasive methods, that either (1) the burrow is not being used for breeding, (2) a previously active nest has failed and the burrow is no longer active, or (3) all juveniles from the occupied burrow are foraging independently and capable of independent survival and the burrow is no longer an active nest burrow. Owls present after February 1 shall be assumed to be nesting unless evidence indicates otherwise. Nest-protection buffers described below shall remain in effect until August 31 or, based upon monitoring evidence, until the nest has failed or all juvenile owls are foraging independently as determined by a qualified biologist. 2. Site-specific, no-disturbance buffer zones shall be established and maintained between project activities and occupied burrows, using the distances recommended in the CDFW guidelines (CDFW 2012). Refer to Table 19 in this EIR for these site-specific no-disturbance buffer zones. The appropriateness of using reduced buffer distances or burrow-specific buffer distances shall be established on a case-by-case basis by a qualified biologist in consultation with CDFW, and shall depend on existing conditions (e.g., vegetation/topographic screening and current disturbance regimes). If necessary, buffer distances shall be carefully reassessed and relaxed or modified, based on future development plans (e.g., increased or intensified construction activities), by a qualified biologist who may consult with CDFW. The buffer zones shall be clearly delineated by highly visible orange construction fencing, which shall be maintained in good condition through construction of project or until construction activities are no longer occurring in the vicinity of the burrow. 3. During the nonbreeding season (generally September 1– January 31), a qualified biologist may passively relocate burrowing owls found within construction areas. Prior to passively relocating burrowing owls, a Burrowing Owl Exclusion Plan shall be prepared by a qualified biologist in accordance with Appendix E of the *Staff Report on Burrowing Owl Mitigation* (CDFW 2012). The Burrowing Owl Exclusion Plan shall be submitted for review and approval to the CDFW and County Department of Planning and Building prior to implementation. The biologist shall accomplish such relocations using one-way burrow doors installed and left in place for at least two nights; owls exiting their burrows will not be able to re-enter. Then, immediately before the start of construction activities, the biologists shall remove all doors and excavate the burrows to ensure that no animals are present the burrow. The excavated burrows shall then be backfilled. To prevent evicted owls from occupying other burrows in the impact area, the biologist shall, before eviction occurs, (1) install one-way doors and backfill all potentially suitable burrows within the impact area, and (2) install one-way doors in all suitable burrows located within approximately 50 feet of the active burrow, then remove them once the displaced owls have settled elsewhere. When temporary or permanent burrow-exclusion	

Impact	Mitigation Measure(s)	Residual Impact

methods are implemented, the following steps shall be taken:

a) Prior to excavation, a qualified biologist shall verify that evicted owls have access to multiple, unoccupied, alternative burrows, located nearby (within 250 feet) and outside of the projected disturbance zone. If no suitable alternative natural burrows are available for the owls, then, for each owl that is evicted, at least two artificial burrows shall be installed in suitable nearby habitat areas. Installation of any required artificial burrows preferably shall occur at least two to three weeks before the relevant evictions occur, to give the owls time to become familiar with the new burrow locations before being evicted. The artificial burrow design and installation shall be as described in the Example Components for Burrowing Owl Artificial Burrow and Exclusion Plans per Appendix E of the *Staff Report on Burrowing Owl Mitigation* (CDFW 2012).

b) Passive relocation of burrowing owls shall be limited in areas adjacent to project activities that have a sustained or low-level disturbance regime; this approach shall allow burrowing owls that are tolerant of project activities to occupy quality, suitable nesting and refuge burrows. The use of passive relocation techniques in a given area shall be determined by a qualified biologist who may consult with CDFW, and shall depend on existing and future conditions (e.g., time of year, vegetation/topographic screening, and disturbance regimes). Because the project incorporates retention of open space immediately adjacent to the project footprint, no compensatory mitigation for habitat loss is required for this site.

(f) Pallid Bat and Bat Roost Avoidance. A qualified biologist shall conduct a survey before any grading or removal of trees, particularly trees 12 inches in diameter or greater at 4.5 feet above grade with loose bark or other cavities within 48 hours prior to removal of trees. If no active roosts are found, no further action shall be required. A survey report summarizing results of the survey shall be submitted to the County Department of Planning and Building within one week of completing surveys.

If active maternity roosts or hibernacula are found, the structure or tree occupied by the roost shall be fully avoided and not removed or otherwise impacted by project activities during the maternity season. A minimum 100-foot ESA avoidance buffer shall be demarcated by highly visible orange construction fencing around active maternity roosts. No construction equipment, vehicles, or personnel shall enter the ESA without clear permission from the qualified biologist. ESA fencing shall be maintained in good condition for the duration of the maternity season. The roost shall be removed only after the maternity season has ended, and shall be removed under the direction of a qualified biologist.

If active non-maternity bat roosts (e.g., day roosts, hibernacula) are found in trees scheduled to be removed, the individuals shall be safely evicted (e.g., through installation of one-way doors) under the direction of a qualified bat biologist in consultation with the CDFW. In situations requiring one-way doors, a minimum of one week shall pass after doors are installed to allow all bats to leave the roost. Temperatures need to be sufficiently warm for bats to exit the roost, because bats do not typically leave their roost daily during winter months in coastal California. Eviction shall be scheduled to allow bats to leave during nighttime hours, thus increasing their chance of finding new roosts with a minimum of potential predation during daylight.

(g) American Badger Avoidance and Minimization. The mitigation measures below are recommended to determine whether badgers are present in the area and to prevent badgers from becoming trapped in burrows during construction activities.

1. A pre-construction survey for active badger dens shall be conducted by

Impact	Mitigation Measure(s)	Residual Impact

a County qualified biologist within 30 days of initial ground disturbance activities. The survey shall cover the entire area proposed for development plus a 50-foot buffer. Surveys shall focus on both old and new den sites. A survey report summarizing results of the survey shall be submitted to the County Department of Planning and Building within one week of completing survey.

2. In order to avoid the potential direct take of adults and nursing young, no grading shall occur within 50 feet of an active badger den, as determined by a qualified biologist, between March 1 and June 30. Activity status between March 1 and June 30 may be monitored through the use of wildlife cameras. Fiber optic scopes shall not be used during the season in which young may be present in dens.
3. Construction activities during July 1 and March 1 shall comply with the following measures to avoid direct take of adult and weaned juvenile badgers.
    a) Status of dens shall be established through observation of den use. If dens are too long to see the end, a fiber optic scope or other acceptable method, such as multiple nights of documentation with a wildlife camera, shall be used to assess the presence of badgers. Inactive dens shall be excavated by hand with a shovel to prevent badgers from re-using them during construction.
    b) Passive relocation shall be used to evict animals from active burrows to prevent direct mortality or injury. Although displaced animals may compete with other badgers in the surrounding area, given the relatively small size of the development footprint compared with surrounding retained open space there is available habitat for displaced individuals. Badgers shall be discouraged from using currently active dens prior to the grading of the site by partially blocking the entrance of the den with sticks, debris and soil for 3 to 5 days. Access to the den shall be incrementally blocked to a greater degree over this period. Alternatively a one-way door in conjunction with daily monitoring and wildlife cameras may be used. After badgers have stopped using active dens within the project boundary, the dens shall be hand-excavated with a shovel to prevent re-use.
    c) A qualified biologist shall be present during the initial clearing and grading activity. If badger dens are found, all work shall cease until the biologist can safely close the badger den. Once the badger dens have been closed, work on the site may resume.

(h) Silvery Legless Lizard Avoidance and Minimization. Within 30 days prior to initiation of ground disturbance areas in sandy soils and areas of oak canopy within the impact footprint, a qualified biologist shall conduct a raking survey to search for legless lizards. Any individuals found shall be relocated to appropriate habitat at least 50 feet outside the development footprint. A survey report summarizing results of the survey shall be submitted to the County Department of Planning and Building within one week of completing survey. A qualified biologist shall monitor initial vegetation clearing and ground disturbance in areas of suitable habitat, primarily associated with oak canopy near the drainage crossing, to salvage and relocate individuals. A monitoring report summarizing results of the monitoring shall be submitted to the County Department of Planning and Building within one week of completing monitoring work for this species.

(i) California Red-legged Frog Avoidance and Minimization. The applicant shall ensure the following actions are implemented to avoid and minimize potential impacts to California red-legged frog (CRLF):

- Activities associated with the drainage crossing and any impacts to wetlands shall occur during the dry season when no water is present in

Impact	Mitigation Measure(s)	Residual Impact

the southeastern drainage.

- A pre-construction survey of the proposed disturbance footprint for CLRF shall be conducted by a qualified biologist within 48 hours prior to the start of all project activities associated with the drainage crossing or that have potential to impact wetlands and seeps, including ESA fencing installation, to confirm this species is not present in the work area. A report documenting results of the survey shall be provided to the County Department of Planning and Building. ESA fencing installation shall count as the start of construction for purposes of survey timing.
- A biological monitor familiar with CRLF will monitor all initial site disturbance within 200 feet of the drainage, including vegetation removal, initial grading, and ESA fence installation. The monitor(s) shall be approved by the County Department of Planning and Building prior to working on the project.
- In the event the pre-construction survey or the onsite monitor identifies the presence of individuals of CRLF prior to or during construction, then the applicant shall stop work until the CRLF leave the site of their own accord. If CRLF do not move off site on their own, the applicant shall comply with all relevant requirements of the federal Endangered Species Act prior to resuming project activities as follows:
  - Prior to the initiation of any other protective measures, a qualified biologist (i.e., biologist approved by USFWS to translocate CRLF shall, in consultation with USFWS as applicable, identify appropriate relocation sites for CRLF that may be observed during the pre-construction survey or monitoring activities described below and need to be moved from within the limits of direct impact disturbance.
  - Relocation or other take (e.g. entrapment) of CRLF can only be conducted by an authorized biologist and the project applicant must have been issued the requisite take authorizations from USFWS before any relocation activity can commence.
  - If the USFWS does not authorize the relocation of CRLF occurring within the project site, CRLF found within the project site shall be avoided with a 100-foot buffer and no activities shall occur within that buffer until the CRLF has left the project site on its own.
- Impacts to drainage and wetland habitats with potential to support CRLF shall be fully offset (see Mitigation Measure BIO-2).

(j) Western Pond Turtle Avoidance and Minimization. The applicant shall ensure the following actions are implemented to avoid and minimize potential impacts to western pond turtle:

- A pre-construction survey of the proposed disturbance footprint for western pond turtle shall be conducted by a qualified biologist within 48 hours prior to the start of project construction associated with the drainage crossing, including ESA fencing installation, to confirm this species is not present in the work area. A report documenting results of the survey shall be provided to the County Department of Planning and Building. ESA fencing installation shall count as the start of construction for purposes of survey timing.
- A biological monitor familiar with semi-aquatic species that have potential to occur will monitor all initial site disturbance associated with the drainage crossing, including vegetation removal and ESA fence installation. The monitor(s) shall be approved by the County Department of Planning and Building prior to working on the project. If western pond turtles are found, the monitor will halt work until the individual can be moved to a safe location outside the work area, in an area of suitable habitat.
- Access routes, staging, and construction areas shall be limited to the

Impact	Mitigation Measure(s)	Residual Impact
	minimum area necessary to achieve the project goal and minimize potential impacts to western pond turtle habitat, including locating access routes and construction staging areas outside of wetlands and riparian areas to the maximum extent practicable. **(k) Night Lighting Standards.** The following standards pertaining to night lighting shall be added to the project's design guidelines and submitted to the County Department of Planning and Building for approval prior to issuance of building permits: Night lighting of public areas shall be kept to the minimum necessary for safety purposes: ▪ Exterior lighting within 100 feet of open space shall be shielded and aimed as needed to avoid spillover into open space areas. Decorative lighting shall be low intensity. ▪ Use of high-intensity floodlights on residential lots shall be restricted and all residential lighting shall be shielded. ▪ Street lighting shall be minimized except as needed at intersections for safety purposes.	
Impact BIO-2. Implementation of the project would have a substantial adverse effect of sensitive habitats, including riparian areas. Impacts would be Class II, less than significant with incorporation of mitigation.	**BIO-2** **(a) Construction Best Management Practices.** The applicant shall ensure the following general Best Management Practices (BMPs) are implemented for construction activity within the project site: ▪ Prior to construction, Environmentally Sensitive Areas (ESAs), including wetlands and drainages that are to be preserved, shall be delineated and fenced off to ensure equipment does not enter and to confine access routes and construction areas to the minimum area necessary to construct the project. ▪ Appropriate erosion and sediment control measures shall be implemented to ensure soil and sediment are contained on site and are not allowed to run off into the drainage channels or any wetlands to be preserved. Measures may include fiber rolls, mulches, and placement of silt fence in conjunction with ESA fencing where appropriate. ▪ To the extent feasible, initial ground disturbance and placement of ESA fencing shall be conducted during the dry season, or during periods of no rain in which the site is dry. ▪ If trenches or other excavations more than 12 inches deep are not closed nightly, then adequate means of escape shall be provided (i.e. earthen ramps not more than 2:1 slope, wooden boards, etc.). Trenches shall be inspected daily for wildlife and shall be inspected immediately prior to backfilling. Any wildlife within trenches shall be freed and allowed to move out of the project area. ▪ All vehicle maintenance/fueling/staging shall occur a minimum of 100 feet away from any riparian habitat or intermittent streams. Suitable containment procedures shall be implemented to prevent spills. A minimum of one spill kit shall be available at each work location near riparian, sensitive communities, wetlands or streams. ▪ Work within streams and wetlands shall be limited to the dry season when no surface water is present. ▪ Activities within drainages and wetlands shall be limited to the minimum necessary to construct the crossing structure associated with the access road. All equipment operating within streams shall be in good conditions and free of leaks. Spill containment shall be installed under all equipment staged within riparian and sensitive habitats, streams and wetland areas and extra spill containment and clean up materials shall be located in close proximity for easy access. **(b) Work Area Delineation.** To minimize extent of impacts to drainages, work areas in drainages shall be minimized to the minimum area necessary to	Compliance with Mitigation Measure BIO-2, as well as Mitigation Measures BIO-1 and BIO-3, and existing applicable regulations would reduce impacts to sensitive habitats to a less than significant level.

Impact	Mitigation Measure(s)	Residual Impact
	construct proposed improvements. To the extent feasible, riparian vegetation associated with these features shall be avoided. Avoidance fencing for preserved riparian vegetation shall be placed at the outer dripline of the riparian canopy. All work that shall occur within 50 feet of riparian habitat shall be monitored by a qualified biologist to ensure direct impacts to riparian habitat are minimized, and all impacts to special status species are avoided. Riparian setbacks and all native riparian habitat to be avoided by the project shall be fenced or flagged before construction occurs in adjacent areas. A biological monitor shall be present during initial work to ensure compliance with off-limits areas. **(c) Riparian and Aquatic Resource Mitigation.** Where permanent impacts result in removal of streambed, wetland, or riparian vegetation, permanent impacts shall be mitigated at a 2:1 ratio (acreage of riparian corridor preserved and enhanced: acreage of riparian corridor impacted) and shall include replacement plantings to offset loss of native trees and shrubs from the project site. Temporary impacts shall be restored in place at a 1:1 ratio (linear feet restored: linear feet impacted). The design, monitoring schedule, and success criteria for mitigation planting shall be described in a project Aquatic Resource Mitigation and Monitoring Plan that demonstrates no net loss in acreage or function described under measure BIO-3. Where mitigation is accomplished through preservation, restoration, and enhancement, preserved riparian corridors and any surrounding uplands above the top of bank within the area to be preserved shall be placed in a conservation easement or similar legal mechanism and managed in perpetuity. A CDFW Streambed Alteration Agreement (SAA) would be required for activities affecting the bed, bank and riparian areas associated with streams in the development footprint. This SAA may include additional requirements beyond those required here.	
Impact BIO-3. Implementation of the project would potentially reduce the acreage and otherwise impact natural drainages and streams and/or wetlands that may be jurisdictional waters under Section 404 of the Clean Water Act. This impact would be Class II, less than significant with incorporation of mitigation.	**BIO-3** **(a) Wetland Avoidance and Minimization.** Impacts to wetlands shall be avoided to the extent feasible. General project staging and laydown activities shall not occur within wetlands during construction. To avoid unnecessary encroachment into wetlands, all wetlands to be preserved in the project site shall be clearly shown on project plans and the limits marked with highly visible flagging, rope, or similar materials in the field. Access allowed within these features for the purposes of construction in and near such features (e.g., road crossings, trenching) shall be clearly delimited on project plan sets, and these allowed work limits shall also be staked in the field, to prevent construction personnel from causing impacts to areas outside of work limits. Where necessary, silt fencing or other measures may be used to protect adjacent wetlands from sediment transport or other indirect impacts that could result from adjacent construction. Maintenance activities associated with roads and crossings shall not be staged within wetlands. A biological monitor shall be present to ensure compliance with off-limits areas. **(b) Aquatic Resource Mitigation and Monitoring Plan.** To compensate for permanent impacts to streambed, riparian, and wetlands on site, streambed, riparian habitat, and wetlands shall be created, preserved, restored or enhanced in kind, and managed in perpetuity at a 2:1 mitigation ratio (acres created and preserved: acres impacted). Permanent loss includes all aquatic resources affected by permanent fill placement (which may occur, for example, from mass grading or new road or structure placement). Temporary impacts to wetlands shall be mitigated through onsite restoration. The permanent protection and management of the mitigation area shall be ensured through an appropriate mechanism, such as a conservation easement granted to a public or private entity authorized by Section 815.3 of the California Civil Code to acquire and hold conservation easements, deed restriction, or fee title purchase.	Implementation of Mitigation Measure BIO-3, as well as implementation of Mitigation Measure BIO-2, would reduce the project impacts to natural drainages and streams and/or wetlands that may be jurisdictional waters of the California Department of Fish and Wildlife, Regional Water Quality Control Board, and/or U.S. Army Corps of Engineers to less than significant levels.

Impact	Mitigation Measure(s)	Residual Impact
	A project-specific Aquatic Resource Mitigation and Monitoring Plan shall be prepared by a qualified restoration ecologist and shall include, at a minimum, the following information: 1. Wetlands, riparian areas, and waters impacts summary and habitat mitigation actions; 2. Goals of the restoration to achieve no net loss; 3. A map depicting the location of the mitigation site(s) and a detailed description of existing site conditions; 4. A detailed description of the mitigation design, including: a. Location of the restored, enhanced, or created features; b. Proposed site construction schedule; c. Description of existing and proposed soils, hydrology, geomorphology, and site stability; d. Mitigation plantings for the loss of existing riparian/wetland habitat shall be located in the drainages that are proposed to be modified or preserved as part of the project to the fullest extent feasible. The compensatory program shall provide a minimum 2:1 ratio of habitat values and functions to that impacted. e. Restoration plant palettes shall be with appropriate native species from locally collected stock. f. A detailed description of the steps required for site preparation and a conceptual installation plan; g. A description of recommended soil amendments and other site preparation; h. Development of a planting plan including details on plant procurement, if necessary, propagation, allowable species for seeding and relative pounds/acre, and application; i. Maintenance plan for the restored areas or created wetlands and riparian plantings; j. A description of specific monitoring metrics, and objective performance and success criteria, such as delineation of created area as jurisdictional wetland per United States Army Corps of Engineers (USACE) methods within five years of construction, minimum riparian tree and canopy cover measures in the enhanced stream reaches within 10 years of restoration, and others; k. Monitoring methods for vegetation and soils, and measures stipulating quantitative monitoring to occur once per year for at least five years following construction of the wetlands or until success criteria are met; l. A list of reporting requirements and reporting schedule; and m. A contingency plan for mitigation elements that do not meet performance or final success criteria within five years. This plan shall include specific triggers for remediation if performance criteria are not being met and a description of the process by which remediation of problems with the mitigation site (e.g., presence of noxious weeds) shall occur. Permits from the USACE pursuant to Section 404 of the Clean Water Act, a water quality certification from the Regional Water Quality Control Board (RWQCB) pursuant to Section 401 of the Clean Water Act, and a Streambed Alteration Agreement from the CDFW pursuant to Section 1600 et seq. of the California Fish and Game Code are typically require for any grading or fill activity within drainages and wetlands, and may include additional mitigation requirements. The Aquatic Resource Mitigation and Monitoring Plan shall be submitted to the County Department of Planning and Building prior to issuance of grading permits.	

Impact	Mitigation Measure(s)	Residual Impact
	(c) Erosion and Sedimentation Control. To control sedimentation during and after project implementation, appropriate erosion control best management practices (i.e. silt fence, etc.) shall be implemented to stabilize all disturbed soils. No plastic monofilament netting shall be utilized on-site. During construction, no litter or construction debris shall be placed within jurisdictional areas. All such debris and waste shall be picked up daily and properly disposed of at an appropriate site. In addition, all project-generated debris, building materials, and rubbish shall be removed from any potential jurisdictional area and from areas where such materials could be washed into them. Any substances which could be hazardous to aquatic species resulting from project-related activities shall be prevented from contaminating the soil and/or entering any potential jurisdictional area. During and after construction, inspection and maintenance will be performed by a Qualified SWPPP Practitioner or a biologist with erosion and sediment control experience to identify and repair areas of concentrated runoff and sediment transport. Implement a planting plan designed to provide temporary and permanent vegetative cover of exposed soils to minimize erosion. Exposed soils shall be hydroseeded immediately upon completion of ground-disturbing activities, and allowed sufficient time to establish prior to the rainy season (October-April).	
Impact BIO-4. Implementation of the project would interfere with the movement of resident or migratory fish or wildlife species or with established resident or migratory wildlife corridors. This impact would be Class II, less than significant with incorporation of mitigation.	Mitigation Measures BIO-1 through BIO-3.	Implementation of Mitigation Measures BIO-1, BIO-2, and BIO-3 would reduce potential impacts to wildlife movement to a less than significant level by adjusting the timing of construction activities in drainages on the project site, minimizing impacts to trees, as well as reducing night lighting onto remaining habitats.
Impact BIO-5. Implementation of the project could conflict with local policies or ordinances protecting biological resources, such as County of San Luis Obispo policies regarding native trees. This impact would be Class II, less than significant with incorporation of mitigation.	**BIO-5** **(a) Tree Protection and Replacement Plan.** To minimize impacts to native trees and offset removals, a tree protection and replacement plan shall be prepared prior to initiation of construction, and implemented throughout construction. At a minimum, the plan shall include the following elements: 1. The location and extent of driplines for all native trees with a diameter at breast height (dbh) of 6 inches or greater, within 25 feet of grading limits shall be identified. Construction envelopes shall be designated outside the driplines of all oak trees and riparian areas. All ground disturbances including grading for building, accessways, easements, subsurface grading, sewage disposal and well placement shall be prohibited outside construction envelopes. 2. All native trees with a dbh of 6 inches or greater, within 25 feet of proposed ground disturbances shall be temporarily fenced with chain-link or other material throughout all grading and construction activities. The fencing shall be installed six feet outside the dripline of each oak tree, and shall be staked every six feet. No construction equipment shall be staged, parked, stored or operated within six feet	Implementation of Mitigation Measure BIO-5 would reduce impacts associated with native tree removal to less than significant levels.

Impact	Mitigation Measure(s)	Residual Impact
	of any oak tree dripline. 3. During construction, washing of concrete, paint or equipment shall occur only in areas where polluted water and materials can be contained for later removal from the site. Washing shall not be allowed near sensitive biological resources. An area designated for washing functions shall be identified on plans and clearly marked on the project site during construction. 4. No permanent irrigation shall occur within the dripline of any existing oak tree. 5. No fill soil, rocks, or construction materials shall be stored or placed within six feet of the dripline of oak trees. Any trenching required within the dripline or sensitive root zone of any oak tree to be preserved shall be done by hand. Any construction activity required within three feet of an oak trees dripline to be preserved shall be completed with hand tools to the extent feasible. The plan shall identify requirements for replacement plantings, including installation, temporary irrigation, maintenance, and follow-up monitoring for a minimum of seven years. Replacement plantings shall be in kind, and shall be installed at a 4:1 ratio for each oak tree over 6 inches in diameter that is removed, and at a 2:1 ratio for each oak tree over 6 inches in diameter at breast height that is impacted. Success criteria and an adaptive management strategy shall be included in the plan. Plantings of oak trees can be included as a component of the Riparian and Aquatic Resources Mitigation work where restoration with oak trees is compatible with the restoration site condition and goals. The plan shall be submitted to the County Department of Planning and Building prior to the start of construction. An annual monitoring plan summarizing implementation progress shall be submitted by January 31 of the following year until success criteria are met.	
Cultural Resources		
Impact CUL-1. No archeological or historical resources have been identified on the project site. However, earth disturbing activities associated with the project have the potential to uncover previously unidentified cultural resources. Therefore, impacts would be Class II, less than significant with incorporation of mitigation.	**CUL-1** **Halt Work Order for Discovery of Previously Unidentified Cultural Resources.** In the event that historical or archaeological remains are discovered during earth disturbing activities associated with the project, an immediate halt work order shall be issued and the County Department of Planning and Building shall be notified. A qualified archaeologist shall conduct an assessment of the resources and formulate proper mitigation measures, if necessary. After the find has been appropriately mitigated, work in the area may resume. A Chumash representative shall monitor any mitigation excavation associated with Native American materials. **Halt Work Order for Discovery of Human Remains.** In the event that human remains are exposed during earth disturbing activities associated with the project, an immediate halt work order shall be issued and the County Department of Planning and Building shall be notified. State Health and Safety Code Section 7050.5 requires that no further disturbance of the site or any nearby area reasonably suspected to overlie adjacent human remains shall occur until the County Coroner has made the necessary findings as to origin and disposition pursuant to Public Resources Code Section 5097.98. If the remains are determined to be of Native American descent, the coroner shall notify the Native American Heritage Commission within 24-hours.	Mitigation Measure CUL-1 would reduce any potential impacts to previously unidentified archeological or historical resources to a less than significant level.
Impact CUL-2. The project could result in impacts to a previously identified paleontological site as well as previously unidentified	**CUL-2** **Worker Environmental Awareness Program Training.** Prior to the initiation of construction activities (including staging and mobilization), the applicant shall ensure all personnel associated with project construction attend a Worker Environmental Awareness Program (WEAP) training. The training shall be conducted by a qualified paleontologist, to aid workers in recognizing paleontological resources that may occur in the project area. The specifics of	Mitigation Measure CUL-2 would reduce potential impacts to the identified paleontological site as well as to unidentified

Impact	Mitigation Measure(s)	Residual Impact
paleontological resources within the project site. Therefore, impacts associated with disturbance of paleontological resources would be Class II, less than significant with incorporation of mitigation.	this program shall include identification of the paleontological resources, a description of the regulatory requirements for the encounter and preservation of such resources, and review of the limits of construction and avoidance measures required to reduce impacts to paleontological 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 provided by the trainer documenting they have attended the WEAP and understand the information presented to them. **Education and Construction Monitoring Program.** A qualified paleontologist shall monitor all initial ground disturbing activities within the project site. In the event that paleontological artifacts are encountered during site disturbance, all work in the vicinity of the find will be halted until such time as the find is evaluated by a qualified paleontologist and appropriate mitigation (e.g., curation, preservation in place, etc.), if necessary, is implemented. After the find has been appropriately mitigated and signed off the County Department of Planning and Building and qualified paleontologist, as appropriate, work in the area may resume. **Halt Work Order for Discovery of Previously Unidentified Paleontological Resources.** In the event that subsurface paleontological resources are discovered during earth disturbing activities associated with the project, an immediate work stoppage shall be issued and the County Department of Planning and Building shall be notified. A qualified vertebrate paleontologist shall conduct an assessment of the resources and formulate proper mitigation measures, including a monitoring and recovery plan, if necessary. After the find has been appropriately mitigated, work in the area may resume. **Signage for Prohibition of Paleontological Site Tampering.** Signs shall be posted on the property stating that unauthorized collecting of paleontological objects and other activities that could destroy or damage the paleontological sites is prohibited. Signs shall also include warning of trespassing violations and imposed fines. Signs shall be posted in a readily visible location prior to the initiation of construction activities and shall be maintained throughout construction and residential occupation. **Paleontological Site Protection Measures.** The property owner shall make arrangements to protect the known paleontological site through preparation of a protection plan prior to approval by the County of subdivision improvement plans. Based on consultation with the County, a land trust, or other entity, the protection plan shall provide protective steps for the resource such as covering the site until such time that the area could be adequately researched and catalogued with property owner consent, under the guidance of the County or other appropriate entity.	paleontological resources within the project site to a less than significant level.
Geology and Soils		
Impact GEO-1. The project has potential to result in exposure to or production of unstable earth condition such as landslides, liquefaction, and secondary deformation. Therefore, impacts would be Class II, less than significant with incorporation of mitigation.	**GEO-1** **a. Design-level Geotechnical Investigation** ▪ Prior to any project grading or construction activities, a design-level geotechnical investigation shall be performed and shall include site-appropriate geotechnical design criteria and construction recommendations for the proposed roadway. ▪ Following completion of subdivision improvements, a design-level geotechnical engineering investigation shall be performed for each lot. Structures and foundations shall be in conformance with the California Building Code guidelines, and based on geotechnical design criteria provided by the project geotechnical engineer for each lot. A mitigation plan shall be prepared based on potential liquefaction impacts to the affected improvements determined during the design-level geotechnical engineering investigation for the subdivision. Mitigation may involve subexcavation and recompaction of some	Mitigation Measure GEO-1 would reduce potential impacts associated with exposure to or production of unstable earth conditions, such as landslides, earthquakes, liquefaction, ground failure, land subsidence or other similar hazards in the project area to a less than significant level.

Impact	Mitigation Measure(s)	Residual Impact
	portion of the alluvial soils underlying the improvements. It is recommended that potential liquefaction impacts on Lot 11 be evaluated as part of design-level geotechnical engineering investigations, and appropriate mitigation measures be developed and incorporated into foundation and building plans prior to the issuance of building permits. **b. Earthquake Ground Shaking Design.** The site-specific characteristics of earthquake ground shaking shall be quantified and incorporated into structural design of the site structures, as part of site-specific engineering evaluations for individual lot development. This information shall be included in the project design plans and submitted to the County Department of Planning and Building prior to issuance of building permits. **c. Drainage Improvements.** Site development shall incorporate sufficient surface and subsurface drainage improvements. Surface and subsurface water that is intercepted and collected by drainage improvements shall not be allowed to discharge onto, or upslope from, the artificial (cut and fill) slopes or landslide areas. Surface and subsurface drainage improvements shall be submitted to the County Department of Planning and Building prior to issuance of grading permits. **d. Fault Setbacks.** In the event that future development is proposed in the fault setback zone, a fault investigation shall be performed to identify and evaluate potential fault rupture hazard impacts on the proposed development. A report summarizing results of the investigation shall be submitted to the County Department of Planning and Building prior to issuance of building permits.	
Impact GEO-2. The proposed development is not located within a defined State Special Study Zone or County fault zone. However, fault traces associated with the Edna fault zone and Los Osos fault zone are present in the vicinity of the project site. Therefore, impacts would be Class II, less than significant with incorporation of mitigation.	**GEO-2** The proposed development area shall maintain a fault setback distance of 100 feet upslope and 200 feet downslope from the mapped Edna fault zone contact (Plate 8, Geologic Hazards and Constraints Map, of the *Engineering Geologic and Geotechnical Feasibility Investigation* included in Appendix E of this EIR).	Mitigation Measure GEO-2 would reduce potential impacts associated with the Edna fault zone and Los Osos fault zone to a less than significant level.
Impact GEO-3. Expansive soil units may underlie portions of the proposed residential lots. Therefore, impacts would be Class II, less than significant with incorporation of mitigation.	**GEO-3** **Expansive Soil Testing and Removal.** As part of standard stripping operations during grading for the proposed roadway and structures, potentially expansive materials shall be removed from the development area. Mudstone units which underlie portions of the proposed development shall also be tested for expansibility if encountered during site-specific geotechnical engineering investigations. The project geotechnical engineers for individual lot developments shall provide site-specific geotechnical design criteria and construction recommendations based on their independent evaluations.	Mitigation Measure GEO-3 would avoid adverse effects to the proposed structures due to expansive soils and this potential impact would be reduced to a less than significant level.

Impact	Mitigation Measure(s)	Residual Impact
Impact GEO-4. The project would be potentially inconsistent with the Geologic and Seismic Hazards goals and policies contained in the County's Safety Element. This impact would be Class II, less than significant with incorporation of mitigation.	Mitigation measure GEO-1.	With implementation of Mitigation Measure GEO-1, the project would be consistent with the applicable County Safety Element goals and policies related to Geologic and Seismic Hazards and impacts would be less than significant.
Hazards and Hazardous Materials		
Impact HAZ-1. Due to the presence of current and historic agricultural practices on the majority of the project site, on-site soils may contain contaminants that could pose a risk to health. Impacts related to exposure to residual chemicals on the project site would be Class II, less than significant with incorporation of mitigation.	**HAZ-1** **Phase II Soil Sampling.** Soil samples shall be taken within the development area on project site by a qualified hazardous materials specialist to determine the presence or absence of pesticides. If soil sampling indicates the presence of any contaminant in hazardous quantities, the RWQCB and DTSC will be contacted to determine the level of any necessary remediation efforts, and these soils shall be remediated in compliance with applicable laws. The project applicant would be required to comply with applicable local, state, and federal requirements regarding site assessment, soils evaluation, and remediation in areas where soil contamination is known or suspected to occur. Site assessments that result in the need for soil excavation would be required to include: an assessment of air impacts and health impacts associated with excavation activities; identification of any applicable local standards that may be exceeded by the excavation activities, including dust levels and noise; transportation impacts from the removal or remedial activities; and control and cleanup measures should an accident occur at the site. **Disclosure of Potential Hazards.** All pertinent information collected by the above mentioned study shall be conveyed to future residents and construction/maintenance workers via signage. This signage shall display warnings informing the public as to the chemicals occasionally and frequency used. Signage shall be installed in a readily visible location prior to the initiation of construction activities and shall be maintained throughout construction. The information shall be updated when necessary. In accordance with the County Right to Farm Ordinance (No. 2050), upon the transfer of real property on the project site, the transferor shall deliver to the prospective transferee a written disclosure statement that shall make all prospective homeowners in the proposed subdivision aware that although potential impacts or discomforts between agricultural and non-agricultural uses may be lessened by proper maintenance, some level of incompatibility between the two uses would remain. This notification shall include disclosure of potential nuisances associated with on-site agricultural uses, including the frequency, type, and technique for pesticide spraying, frequency of noise-making bird control devices, dust, and any other vineyard practices that may present potential health and safety effects. In addition, comprehensive supplemental notification information regarding vineyard operations shall be provided to prospective homeowners prior to property transfer, based on consultation with the San Luis Obispo County Department of Agriculture/Weights and Measures. Should vineyard maintenance practices change substantially (e.g., through the use of new agricultural chemicals or application techniques), notification shall be provided to existing and prospective project residents. **Notice of Intent to Spray.** A communication system shall be established at the time of approval of building occupancy by the County to convey to future residents any notices of intent to spray chemicals. A notice of intent to spray	Implementation of Mitigation Measure HAZ-1 would reduce potential impacts associated with on-site hazardous materials to a less than significant level.

Impact	Mitigation Measure(s)	Residual Impact
	shall be sent to residents no less than two weeks prior to application. Future residents can then take appropriate action. The applicant shall ensure that the County Department of Agriculture/Weights and Measures is informed prior to the application of hazardous chemicals on adjacent agricultural lands. The County Department of Agriculture/Weights and Measures shall be informed no less than two weeks prior to application in order to provide enough time to post disclosure information throughout the proposed residential development. **Security Measures.** In areas nearest to the on-site vineyards, the proposed residential development shall incorporate security measures to discourage trespassing onto agricultural lands. Security measures could include, but would not be limited to, fencing, signage, and landscaping such that public access can be limited during times that spraying or other hazardous agricultural operations occur. Security measures shall be included on project design plans and submitted to the County Department of Planning and Building prior to approval of building occupancy.	
Noise		
Impact N-3. The project would involve temporary noise-producing construction activities in the vicinity of existing residences along Greystone Place in the Los Ranchos Neighborhood. Impacts would be Class II, less than significant with incorporation of mitigation.	**N-3** **Limitation on Construction Hours.** All construction activities shall be limited to the days and hours specified in the County Noise Ordinance Section 22.10.120, with additional limitations listed as follows. No construction shall occur before 7 a.m. or after 6 p.m. on weekdays, or before 8 a.m. or after 5 p.m. on Saturdays and Sundays.	With implementation of Mitigation Measure N-3, construction noise would not be completely eliminated, but the nuisance of construction noise would be greatly reduced and the impact would be reduced to a level below significance.
Land Use and Planning		
Impact LU-2. The project would alter the present land use on the project site resulting in potential incompatibilities with surrounding uses. This impact would be Class II, less than significant with incorporation of mitigation.	The mitigation measures included in Section 4.9, *Noise*, compliance with standard SLOAPCD dust control and operational emissions control measures, structural height limitations, and compliance with County agricultural buffer policies and exterior lighting standards would reduce and/or avoid the potential for compatibility conflicts.	Mitigation measures identified in Section 4.9, *Noise*, compliance with standard SLOAPCD dust control and operational emissions control measures, structural height limitations, and compliance with County agricultural buffer policies and exterior lighting standards would reduce potential land use incompatibility impacts to less than significant levels.

Table 2 Class III, Less than Significant, Environmental Impacts

Impact
Aesthetics
Impact AES-1. The project would not result in development aesthetically incompatible with the surrounding environment nor would it introduce a prominent public view of any on-site uses. Therefore, potential impacts would be Class III, less than significant.
Impact AES-2. Project compliance with the County's Agricultural Lands Clustering Ordinance would maintain the existing rural agricultural character on the majority of the site and the project would be subject to the same development parameters as surrounding development. Therefore, potential impacts to the visual character of the area would be Class III, less than significant.
Impact AES-3. Although the project would introduce new sources of night lighting and glare in the area, compliance with the County's Exterior Lighting Ordinance would reduce the potential adverse effects of new lighting and glare on surrounding areas. Therefore, potential impacts would be Class III, less than significant.
Agriculture and Forest Resources
Impact AG-1. Although the project would permanently convert prime agricultural land to non-agricultural uses, the project would preserve 95 percent of the gross site area in agriculture and/or natural open space in perpetuity. Therefore, impacts related to conversion of prime agricultural land would be Class III, less than significant.
Impact AG-2. Although, the project would permanently convert Prime Farmland and Farmland of Statewide Importance, per the County's soil classification, to non-agricultural uses, the project would preserve 95 percent of the gross site area in agriculture and/or natural open space in perpetuity. Therefore, impacts would be Class III, less than significant.
Impact AG-3. Project compliance with standard SLOAPCD dust control measures and County buffer policies as well as limitations on access to the project site would reduce and/or avoid potential impacts associated with conversion of agricultural uses to non-agricultural use. This impact would be Class III, less than significant.
Impact AG-4. Residential development on the project site is proposed as a Major Agricultural Cluster project and the project would be required to implement a permanent open space easement as well as a Williamson Act Contract for the proposed agriculture/open space parcel. This impact would be Class III, less than significant.
Air Quality
Impact AIR-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.
Impact AIR-2. Criteria pollutants generated by project construction would not exceed any applicable SLOAPCD thresholds. Impacts would be Class III, less than significant.
Impact AIR-3. Criteria pollutants generated by project operation would not exceed any applicable SLOAPCD thresholds. Impacts would be Class III, less than significant.
Impact AIR-4. The project would not expose sensitive receptors to substantial pollutant concentrations. This impact would be Class III, less than significant.
Cultural Resources
Impact CUL-3. No known Tribal Cultural Resources Exist within the project site. Therefore, impacts associated with a substantial adverse change to such resources as a result of the project would be Class III, less than significant.
Geology and Soils
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. There would be no impact.
Greenhouse Gas Emissions
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. This impact would be Class III, less than significant.
Impact GHG-2. The project would be consistent with applicable programs and measures in the County's EnergyWise Plan, designed to reduce GHG emissions. Therefore, this impact would be Class III, less than significant.

Hazards and Hazardous Materials

Impact HAZ-2. No sites were identified in the search of hazardous material/waste sites compiled pursuant to Gov't Code 65962.5 ("Cortese List") that would result in an adverse impact to public health condition. This impact would be Class III, less than significant.

Impact HAZ-3. The project would not impair implementation or physically interfere with the County's Emergency Operations Plan. Therefore, this impact would be Class III, less than significant.

Impact HAZ-4. The proposed residential units would not extend into the Horizontal Airport Imaginary Surface and, thus, would not create an obstruction to air navigation. The project would also be developed in compliance with the standards in the ALUP for the airport and subject to the Conditions of Approval detailed in the Airport Land Use Commission consistency determination letter. Therefore, the project would not result in a safety hazard associated with the San Luis Obispo County Regional Airport for people residing or working in the project area and this impact would be Class III, less than significant.

Impact HAZ-5. The project would be located in a State Responsibility Area within a wildland area with potential for forest fires. However, the project would include adequate emergency access and fire safety components to avoid impacts associated with wildland fire risk to future on-site people and structures. This impact would be Class III, less than significant.

Noise

Impact N-1. The project would involve development of new residences in an area well outside of the noise influence of SR 277 and other noise sources. This would be a Class III, less than significant, impact.

Impact N-2. The project does not involve any major stationary noise sources and would not contribute a substantial fraction to traffic volumes to cause a discernable increase in noise levels. This impact would be Class III, less than significant.

Impact N-4. Construction activities are not expected to cause substantial noise or vibration effects outside of the project area. This would be a Class III, less than significant, impact.

Impact N-5. The project is within the airport review area for the San Luis Obispo County Regional Airport, but is located outside of the 50 decibel CNEL noise contour. For this reason, noise effects from aircraft operations would be Class III, less than significant.

Public Services

Impact PS-1. Payment of public facility fees as a condition of project approval would ensure that the project would not substantially affect the local fire or law enforcement protection services and facilities. Therefore, this impact would be Class III, less than significant.

Impact PS-2. The project would not contribute to exceedance of public school capacities and would be required to pay State mandated school impact fees. Therefore, this impact would be Class III, less than significant.

Impact PS-3. The project would not result in exceedance of available solid waste disposal facilities. Therefore, this impact would be Class III, less than significant.

Transportation and Circulation

Impact T-1. Project-generated traffic would increase traffic volumes on area roadways and at intersections near the project site. Compliance with the requirements of the County's SR 227 Corridor Road Improvement Fee Program and payment of applicable fees, impacts to area roadway segments and intersections would be Class III, less than significant.

Impact T-2. The project would not result in limited access, inadequate sight distance, slow vehicles, or any other design features that would create unsafe conditions on public roadways. Therefore, impacts would be Class III, less than significant.

Impact T-3. Emergency access to the project site would be provided via two private roads that connect to the Rolling Hill neighborhood located northeast of the project site. Therefore, the project would provide adequate emergency access and potential impacts would be Class III, less than significant.

Impact T-4. The project would not generate public transit, pedestrian, or bicycle trips that would decrease the performance or safety of supporting facilities. Impacts would be Class III, less than significant.

Impact T-5. Project-generated traffic would further degrade unacceptable intersection and roadway segment operations under interim (2025) and future year (2035) conditions. Compliance with the requirements of the County's SR 227 Corridor Road Improvement Fee Program and payment of applicable fees, the project's contribution to cumulative impacts to area intersections and roadways would be Class III, less than significant.

Wastewater
Impact W-1. Compliance with the conditions in the Intent to Serve Letter and associated attachments would ensure that the project would not violate applicable waste discharge requirements or result in any adverse effects to CSA 18. Impacts associated with wastewater treatment and collection for the project would be Class III, less than significant.
Water and Hydrology
Impact WH-1. The project is not expected to violate any water quality standards. Project effects on water quality would be Class III, less than significant.
Impact WH-2. The project is not expected to discharge into surface waters or adversely affect water quality. This impact would be Class III, less than significant.
Impact WH-3. The project would not change the quality of groundwater through excessive withdrawals, Nitrogen loading, or other factors. This impact would be Class III, less than significant.
Impact WH-4. The project would create a slight increase in runoff but would not exceed the capacity of stormwater systems or cause substantial pollution. This impact would be Class III, less than significant.
Impact WH-5. The project would not substantially affect soil absorption or substantially affect the amount or direction of surface runoff. This impact would be Class III, less than significant.
Impact WH-6. The project would not substantially change drainage patters or effect on- or off-site sedimentation/erosion or flooding. This impact would be Class III, less than significant.
Impact WH-7. The project would not involve any activities within the 100-year flood zone. Project effects related to flooding would be Class III, less than significant.
Impact WH-8. The project may affect the quantity or movement of available surface or groundwater. Project effects related to available water quantity would be Class III, less than significant.
Impact WH-9. The project would not adversely affect a community water service provider. Project effects related to water supply would be Class III, less than significant.
Impact WH-10. The project would not expose people to risk involving flooding from any source. Project effects related to risk of flooding would be Class III, less than significant.
Land Use and Planning
Impact LU-1. The project would be consistent with the policies and regulations included in the County's General Plan, Land Use Ordinance, and Clean Air Plan. Therefore, the project would result in Class III, less than significant, impacts related to land use and policy/regulation of the project area.

1 Introduction

This document is an Environmental Impact Report (EIR) that examines the potential effects of approving a Vesting Tentative Tract Map (Tract 2429) to subdivide a property into 13 residential lots and a Conditional Use Permit (CUP) to allow for a Major Agricultural Cluster project within the unincorporated portion of the County of San Luis Obispo, approximately 2.5 miles south of the City of San Luis Obispo. The project is described in detail in Section 2.0, 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 Vesting Tentative Tract Map and CUP are discretionary actions requiring approval of the County Planning Commission. 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 Project EIR pursuant to *CEQA Guidelines* Section 15161. A Project EIR is appropriate for a specific development project. As stated in the *CEQA Guidelines* Section 15161:

> This type of EIR should focus primarily on the changes in the environment that would result from the development project. The EIR shall examine all phases of the project, including planning, construction, and operation.
>
> This EIR is to serve as an informational document for the public and County of San Luis Obispo decision-makers. The process will culminate with a Planning Commission hearing to consider certification of a Final EIR 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 April 27, 2016. The NOP and Initial Study are presented in Appendix A of this report. Through the NOP and Initial Study process, the County of San Luis Obispo determined that there was no substantial evidence that the project would cause or otherwise result in significant environmental effects associated with Population and Housing, or Recreation. No further environmental review of these issues is necessary for the reasons summarized in the Section 4.15, *Impacts Found to be Less Than Significant*. The substantiation for determining that these issues would result in no impact, or a less-than-significant impact is

described in further detail in Appendix A, the NOP, and the Initial Study, pursuant to Section 15128 of the *CEQA Guidelines*.

This EIR addresses the issues determined to be potentially significant in the Initial Study, and based on responses to the NOP and scoping discussions among the public, consulting staff, and the County. The County of San Luis Obispo conducted an initial analysis of the proposed development's impacts through the Initial Study and NOP process. The environmental issues addressed in impact sections in this EIR include:

- Aesthetics
- Agriculture and Forest Resources
- Air Quality
- Biological Resources
- Cultural Resources
- Geology and Soils
- Hazards and Hazardous Materials
- Noise
- Population and Housing
- Public Services
- Transportation and Circulation
- Wastewater
- Water and Hydrology
- Land Use

In preparing the EIR, pertinent County policies and guidelines, certified EIRs and adopted CEQA documents, and background documents prepared by the County were utilized. A full reference list is contained in Section 7.0, *References and EIR Preparers*.

Section 6.0, *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 6.0 evaluates the CEQA required "no project" alternative and two alternative development scenarios for the site. It 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 on which this document is based. The *CEQA Guidelines* state:

> "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. (CEQA Guidelines Section 15151)."

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 for the project because it has the principal responsibility for 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). The Local Agency Formation Commission (LAFCO) would be the responsible agency for annexation of the project site to County Service Area (CSA) 18. Other responsible agencies include the Airport Land Use Commission for review of the proposed development within the Airport Review Area Combining Designation of the San Luis Obispo County Regional Airport, Army Corps of Engineers for review of a Nationwide or Individual permit (dependent upon the acreage of total wetland disturbance), and the Regional Water Quality Control Board (RWQCB) for Section 401 Water Quality Certification in the event there is an Army Corps of Engineers permit.

A “trustee agency” refers to a state agency having jurisdiction by law over natural resources affected by a project that are held in trust for the people of the State of California. The California Department of Fish and Wildlife (CDFW) has jurisdiction over biological resources, including waters of the State and rare and endangered plant species, which may be affected by project development, and is, therefore, a trustee agency.

1.4 Environmental Review Process

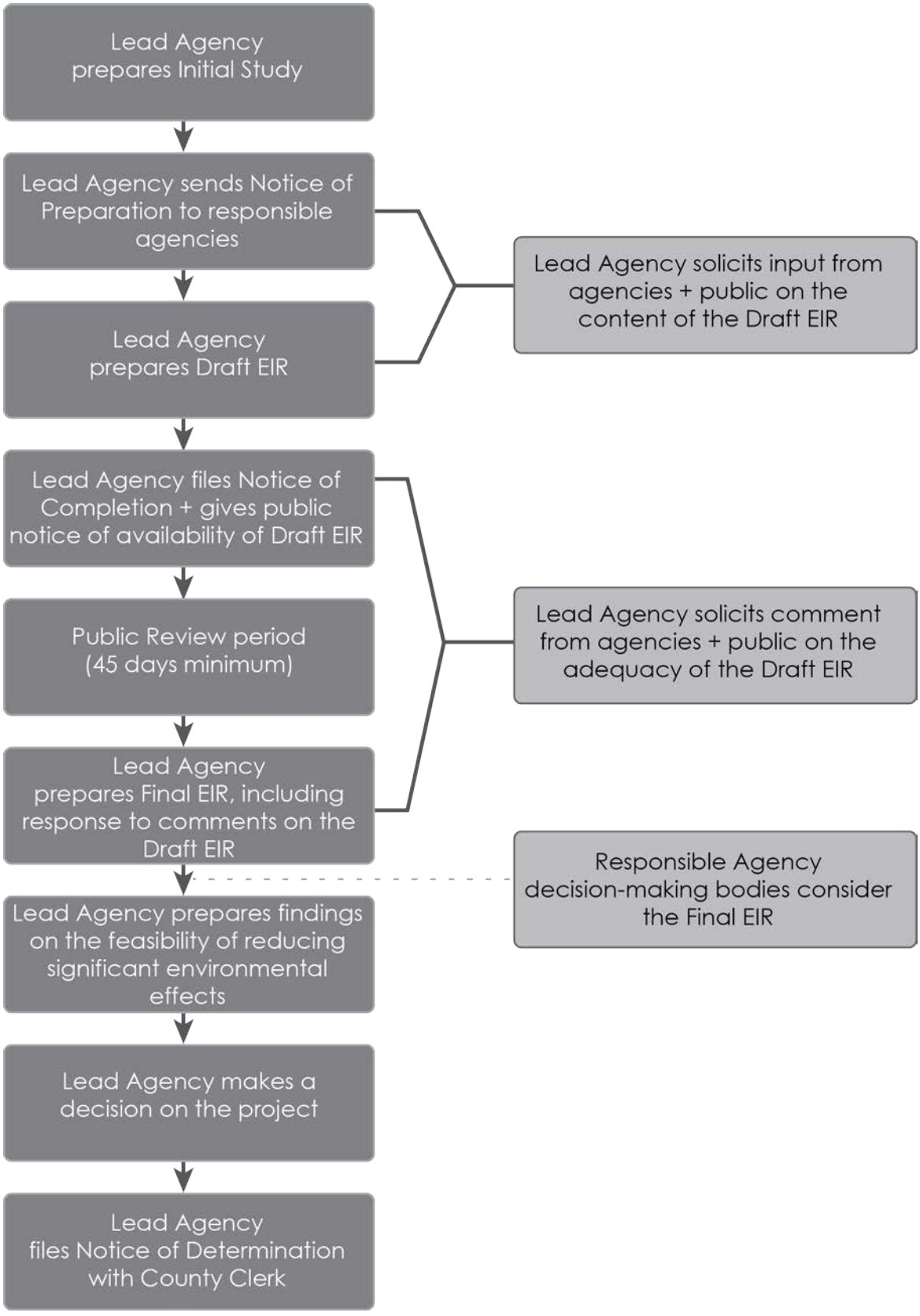
The environmental impact review process required under CEQA is summarized below and illustrated in Figure 1. The steps appear in sequential order.

1. **Notice of Preparation (NOP) Distributed.** Immediately after deciding that an EIR is required, the lead agency must file a NOP soliciting input on the EIR scope to "responsible," "trustee," and involved federal agencies; to the State Clearinghouse, if one or more state agencies is a responsible or trustee agency; and to parties previously requesting notice in writing. The NOP must be posted in the County Clerk's office for 30 days. A scoping meeting to solicit public input on the issues to be assessed in the EIR is not required, but may be conducted by the lead agency.
2. **Draft EIR Prepared.** The Draft EIR must contain: a) table of contents or index; b) summary; c) project description; d) environmental setting; e) significant impacts (direct, indirect, cumulative, growth-inducing and unavoidable impacts); f) alternatives; g) mitigation measures; and h) irreversible changes.
3. **Public Notice and Review.** A lead agency must prepare a Public Notice of Availability of an EIR. The Notice must be placed in the County Clerk's office for 30 days (Public Resources Code Section 21092) and sent to anyone requesting it. Additionally, public notice of Draft EIR availability must be given through at least one of the following procedures: a) publication in a newspaper of general circulation; b) posting on and off the project site; and c) direct mailing to owners and occupants of contiguous properties. The lead agency must consult with and request comments on the Draft EIR from responsible and trustee agencies, and adjacent cities and counties. 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 Clearinghouse (Public Resources Code 21091). Distribution of

the Draft EIR may be required through the State Clearinghouse. This EIR will have a public review period of 45 days.

4. **Notice of Completion.** A lead agency must file a Notice of Completion with the State Clearinghouse as soon as it completes a Draft EIR.
5. **Final EIR.** A Final EIR must include: a) the Draft EIR; b) copies of comments received during public review; c) list of persons and entities commenting; and d) responses to comments.
6. **Certification of Final EIR.** The lead agency shall certify: a) the Final EIR has been completed in compliance with CEQA; b) the Final EIR was presented to the decision-making body of the lead agency; and c) the decision-making body reviewed and considered the information in the Final EIR prior to approving a project.
7. **Lead Agency Project Decision.** A lead agency may: a) disapprove a project because of its significant environmental effects; b) require changes to a project to reduce or avoid significant environmental effects; or c) approve a project despite its significant environmental effects, if the proper findings and statement of overriding considerations are adopted.
8. **Findings/Statement of Overriding Considerations.** For each significant impact of the project identified in the EIR, the lead or responsible agency must find, based on substantial evidence, that either: a) the project has been changed to avoid or substantially reduce the magnitude of the impact; b) changes to the project are within another agency's jurisdiction and such changes have or should be adopted; or c) 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.
9. **Mitigation Monitoring/Reporting Program.** When an agency makes findings on significant effects identified in the EIR, it must adopt a reporting or monitoring program for mitigation measures that were adopted or made conditions of project approval to mitigate significant effects.
10. **Notice of Determination.** An agency must file a Notice of Determination after deciding to approve a project for which an EIR is prepared. A local agency must file the Notice with the County Clerk. The Notice must be posted for 30 days and sent to anyone previously requesting notice. Posting of the Notice starts a 30-day statute of limitations on CEQA challenges.

Figure 1 Environmental Review Process



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2 Project Description

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 Summary

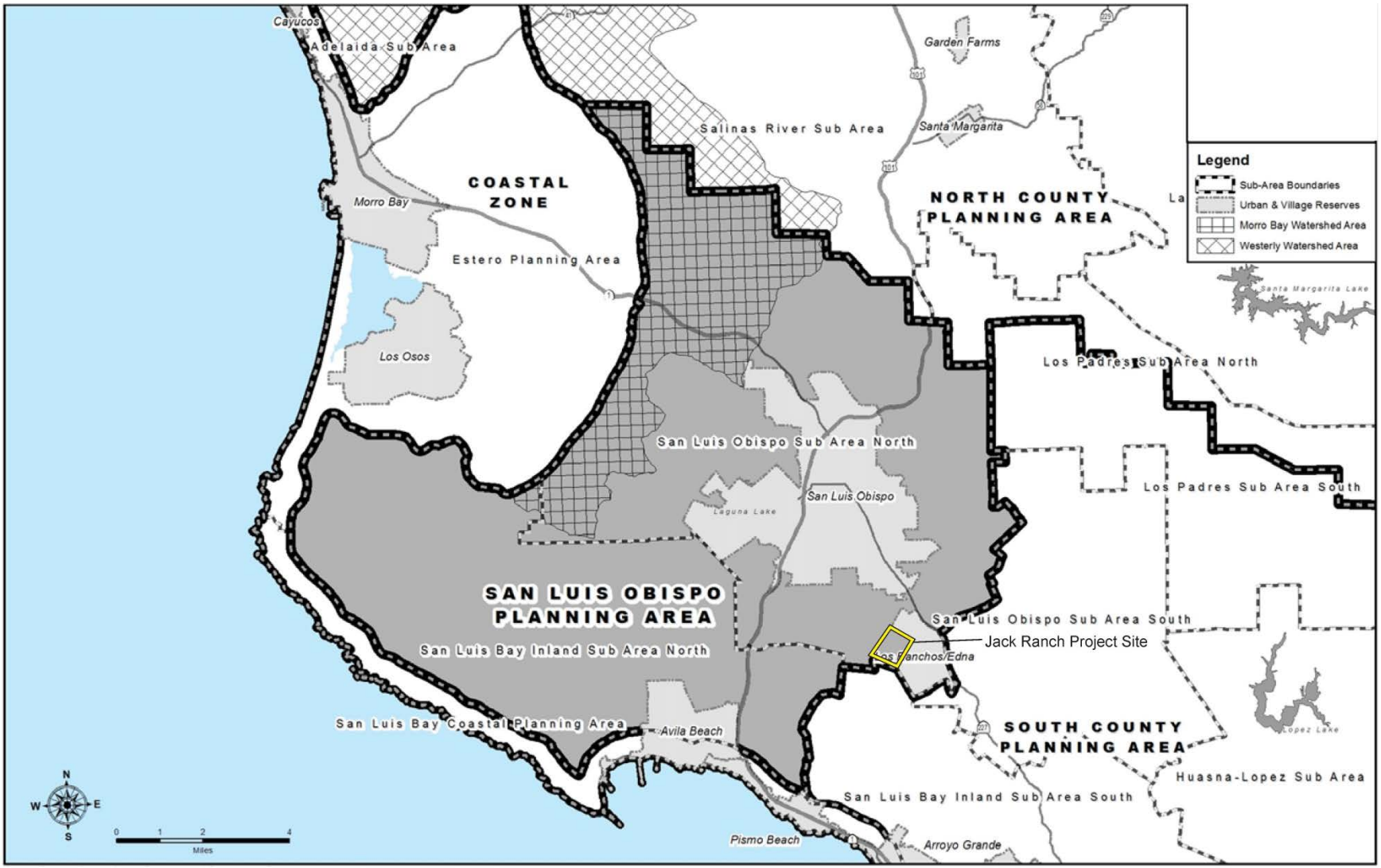
The Jack Ranch San Luis Obispo (SLO) Agricultural Cluster Project is a proposed 14 lot cluster subdivision dividing an existing 299 acre parcel (298.56 acres based on map records) into 13 residential parcels and one agriculture/open space parcel. The proposed project is located within the County of San Luis Obispo, approximately 2.5 miles south of the City of San Luis Obispo (refer to Figures 2 and 3; Figure 2 shows the regional location of the project site and the County Planning Areas while Figure 3 shows the site within its local context). The project site is within San Luis Obispo Sub Area North as designated in the County's San Luis Obispo Area Plan in *Part II of the Land Use and Circulation Elements (LUCE): The Area Plans*. The site is in the Agriculture and Rural Lands categories, with the Airport Review Area combining designation over the entire site and the Sensitive Resource Area (SRA) combining designation over the hillsides in the southern portion of the site.

An aerial view of the project site is shown in Figure 4. The total allowable development area, including the proposed residential lots and roadway infrastructure, would be 14.93 acres (five percent of the gross site area). The remainder of the site would include approximately 163 acres of existing vineyards and proposed vineyard expansion area and approximately 122 acres of natural open space. The proposed residential lots would each be approximately one acre in size (refer to Figure 5, Site Plan), and would be clustered in the southern portion of the site.

The project site is currently accessed for on-site agricultural operations via Ketzel Lane off of Los Ranchos Road near the intersection of Los Ranchos Road and Edna Road (State Route [SR] 227). Upon project development, Ketzel Lane would serve as one of the emergency access points for the proposed development. The primary access for the proposed development would be via Greystone Place, which is the gated main access to the San Luis Country Club and Estates along the southeastern border of the project site. Greystone Place loops through the southeastern corner of the project site adjacent to the proposed development area. Access to the proposed lots would be provided from a cul-de-sac extending from Greystone Place onto the property. Emergency access would also be provided through an existing farm road easement located across from the terminus of Hacienda Avenue at Caballeros Avenue in the Rolling Hills subdivision north of the project site.

The project application includes a Vesting Tentative Tract Map (VTTM; Tract 2429), and a Conditional Use Permit (CUP) to allow a major Agricultural Cluster Project, consistent with Section 22.22.150 of the County Land Use Ordinance and the County land use standards in place in 2001, when the project was accepted for processing. The proposed agriculture/open space parcel would be placed in a Williamson Act Contract and permanent agricultural open space easement consistent with the Land Use Ordinance requirements (Section 22.22.150.B.8). The specific characteristics of the project, including the project applicant, proposed structures, and project objectives, are described in the following sections.

Figure 2 County Planning Areas and Regional Location of the Project Site



Source: San Luis Obispo County. February 2014.

Figure 3 Project Site Location

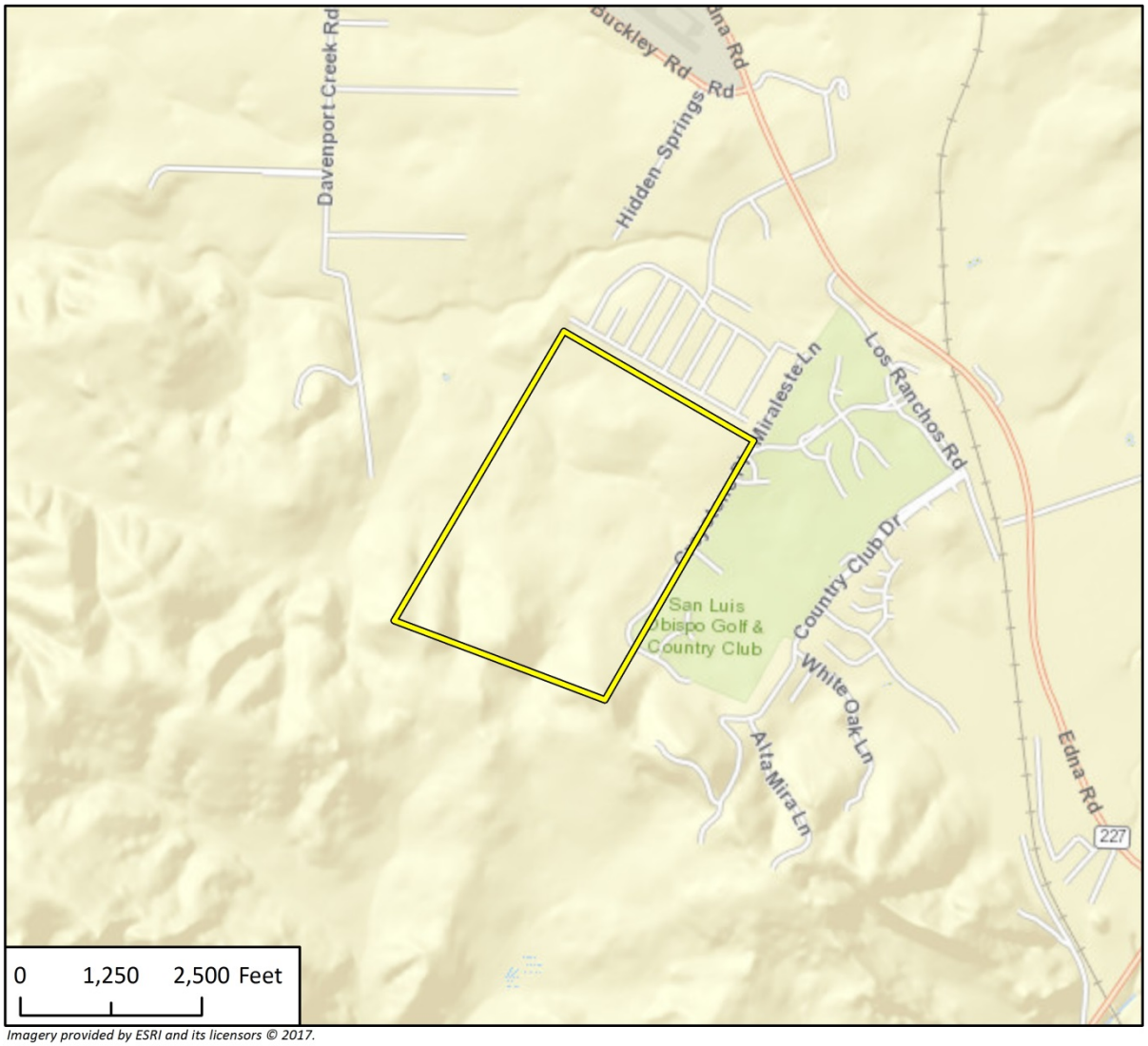
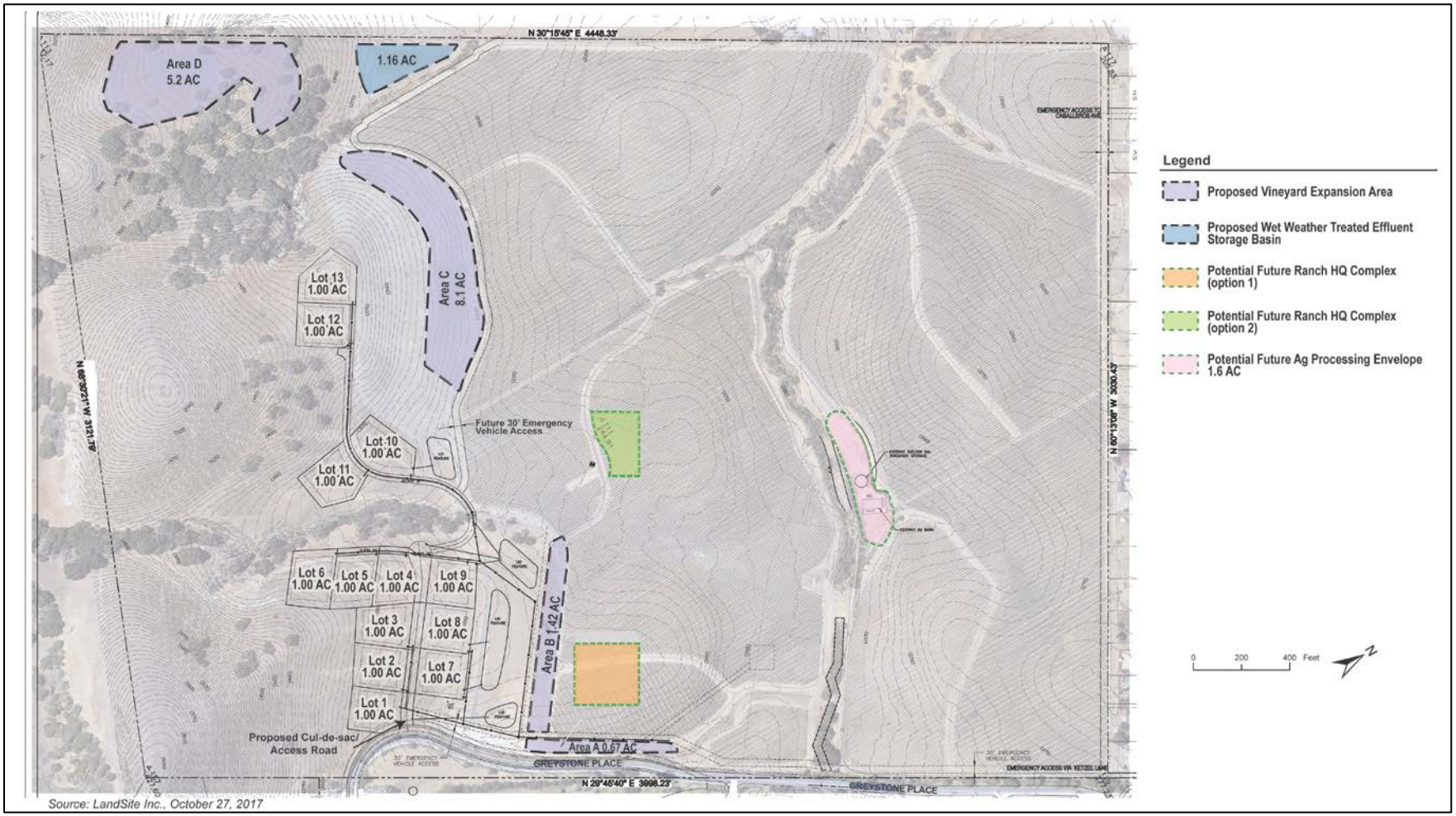


Fig 2-1 - Regional Location

Figure 4 Aerial View of the Project Site

Imagery provided by Google and its licensors © 2016.

Figure 5 Proposed Site Plan



2.2 Project Applicant

The project applicant for the Jack Ranch SLO Agricultural Cluster Project is:

Orcutt Broad, LLC and Erskine Property Trust

Represented by:
Jamie Kirk
Kirk Consulting
8830 Morro Road
Atascadero, California 93422

2.3 Project Location

The approximately 299-acre site is located within the unincorporated portion of the County of San Luis Obispo, approximately 2.5 miles south of the City of San Luis Obispo. The project site is bordered by single-family houses along Caballeros Avenue on the north (Rolling Hills development), Greystone Place to the east (San Luis Obispo Country Club and Estates), and large lot agricultural land to the south and west. Access to the property is currently provided via Ketzel Lane off of Los Ranchos Road near SR 227.

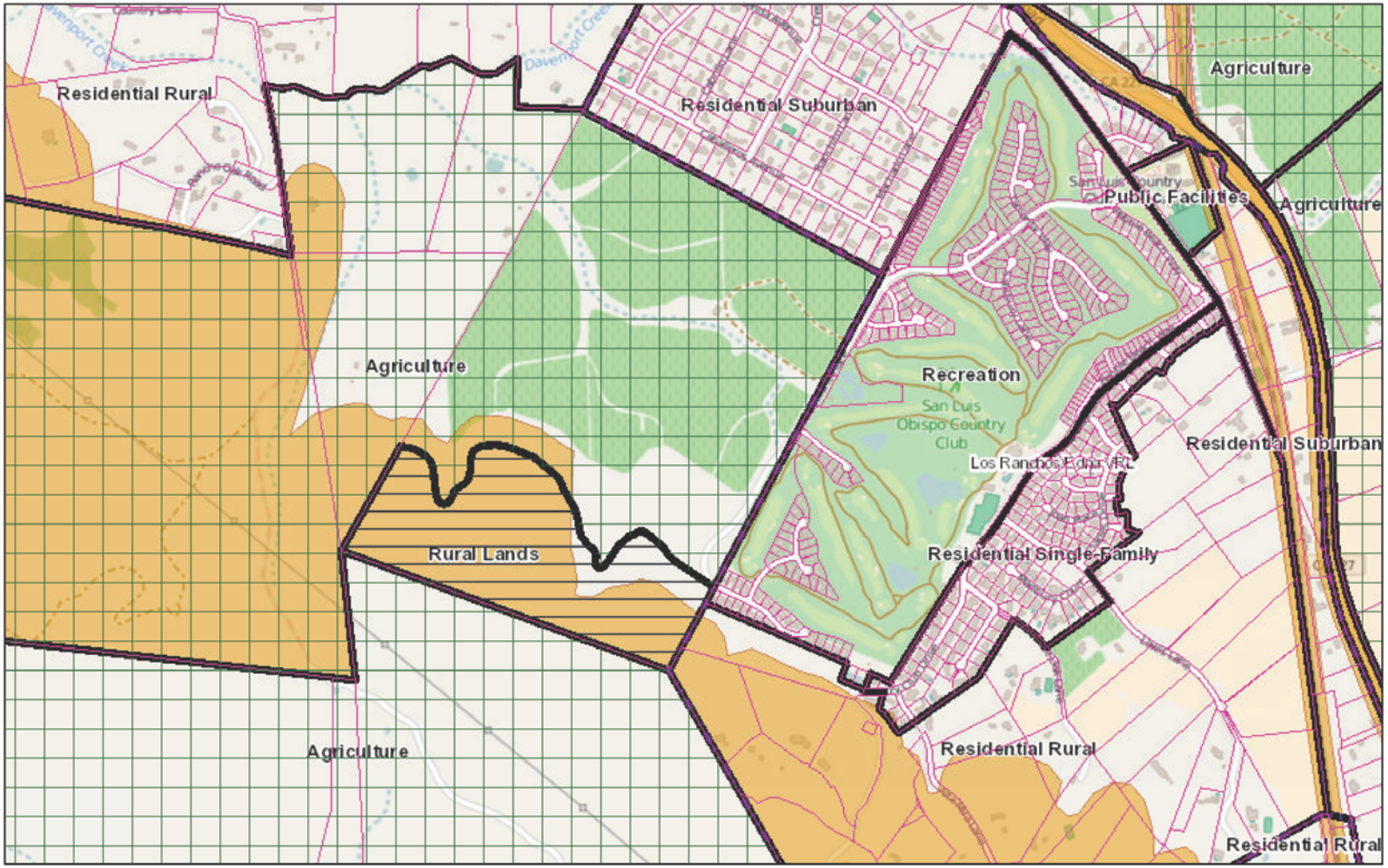
The site is located within the inland portion of the County of San Luis Obispo, and is covered by the San Luis Obispo Area Plan (Chapter IV in the San Luis Obispo County February 2014 *The Area Plans*, update of the General Plan Land Use and Circulation Elements). The Los Ranchos/Edna Village Reserve Line forms the northern and eastern boundaries of the project site. The northern corner of the project site is approximately one mile south of the southern tip of the San Luis Obispo Urban Reserve Line.

Most of the property (approximately 225 acres) is within the Agriculture land use category. The southern portion (approximately 74 acres) is within the Rural Lands land use category. The entire project site is within the Airport Review (AR) combining designation, and the southern portion of the property is also within the Sensitive Resource Area (SRA) combining designation. (San Luis Obispo County February 2014 The Area Plans: pages IV.7-23 and IV.7-27). Two proposed lots (lots 12 and 13) would be located within the mapped SRA. In the San Luis Obispo Plan area, the boundary of the SRA is also used to define areas subject to the County's Highway Corridor Design Standards (Section 22.10.095.C in the Land Use Ordinance). Figure 6 shows the County land use categories and combining designations for the project site and surrounding areas.

2.4 Existing Site Characteristics

The project site currently includes approximately 145 acres of active vineyards, with an associated agricultural accessory building, a water tank, and access roads, within the County's AG (Agriculture) land use category. An un-named tributary to Davenport Creek crosses through the vineyards, draining east to west, and contains riparian habitat bordered by the vineyards (refer to Figure 4). The central and northern portions of the site are characterized by gentle slopes on either side of this drainage crossing through the vineyards.

Figure 6 County Land Use Categories and Combining Designations



Source: San Luis Obispo County Department of Planning and Building. "Permit View" Interactive Mapping system at: http://www.sloplanning.org/PermitView/MapSearch

On the southwestern portion of the property, the north facing slopes increase in gradient up to maximum values of 30 to 40 percent, culminating in four prominent hilltops. This portion of the property contains grassland and scattered oak trees, which are somewhat more concentrated in the drainage areas separating the hills. The elevation of the project site ranges from a low of 180 feet above mean sea level (msl) in the tributary to Davenport Creek, up to 628 feet msl at the hilltop located on the southern point of the parcel.

Table 3 summarizes the existing land use and regulatory characteristics of the site. Figure 4 shows an aerial view of the site in the context of its surroundings, showing the land use patterns in the vicinity.

Table 3 Existing Site Information

Site Characteristic	Description
County Land Use Category	Agriculture (225 acres), Rural Lands (74 acres)
Combining Designations	AR (Airport Review Area – whole property), SRA (Sensitive Resource Area, 77 acres)
Site Size	299 acres
Existing Land Use and Development	Irrigated vineyard and vacant land
Assessor Parcel Number	APN 044-081-040
Legal Description	Lot M and Portion of Lot N, of the Partition of the Hollister Tract, Rancho Corral de Piedra (Record of Survey Book 080 page 1). Note: the Portion of Lot N includes the existing private street access along Hacienda Avenue from Los Ranchos Road.
Planning Area	San Luis Obispo Area Plan (San Luis Obispo Sub Area North), Chapter IV in February 2014 *The Area Plans* (General Plan Land Use and Circulation Elements, Part II)
Surrounding Land Use Categories/Uses	*North*: Residential Suburban (Los Ranchos/Edna Village Reserve (Residential Suburban)/single family residence in the Rolling Hills subdivision *South*: Agriculture (San Luis Bay Inland Sub Area South)/vacant land *East*: Recreation and Residential Rural (Los Ranchos/Edna Village Plan)/golf course, residences *West*: Agriculture (San Luis Obispo Sub Area North)/residences large lots, grazing land
Access	Ketzel Lane off of Los Ranchos Road near the intersection of Los Ranchos Road and SR 227

2.5 Project Characteristics

2.5.1 Summary

The proposed project is a request by Jack Ranch SLO, LLC for approval of a Vesting Tentative Tract Map (VTM) and Conditional Use Permit (CUP) for an Agricultural Lands Cluster Subdivision. As explained in Section 2.5.3 below, under the provisions of Section 22.22.150 of the County Land Use Ordinance (Agricultural Lands Clustering) the County may approve a "bonus" of a 100 percent increase in residential lots over the number that would be allowed in a conventional land subdivision. The County Department of Planning and Building determined that up to seven residential lots could have been created on the property at the time the application was received. With the allowable "bonus" and compliance with the other restrictions of the Agricultural Lands Clustering section of the Land Use Ordinance, a total of up to 14 residences could be developed. The proposed project would create 13 residential cluster lots, approximately one acre each in size, and

one 285-acre agriculture/open space parcel on a 299-acre parcel. The 285-acre agriculture/open space parcel would include existing and proposed agricultural uses and passive open space. Vineyards currently occupy approximately 145 acres on the property, and would be expanded by approximately 18 acres to total approximately 163 acres of vineyards on the project site. Vineyard expansion is not required to qualify for the 13 lots proposed. The project would also preserve approximately 122 acres of open space, to include existing streams and steep hillside areas. The proposed residential development area (approximately 14.93 acres) would be comprised of 13 residential lots, internal road and miscellaneous improvements.

The applicant would also reserve the right to establish a 2.5-acre ranch/farm headquarters envelope within the 285-acre defined agriculture/open space parcel as allowed under the provisions of the Agricultural Lands Clustering section of the Land Use Ordinance. This future farm headquarters would be one of the 14 total residences allowed on the property. Currently, the applicant is considering one of two 1.5-acre sites, north of the proposed residential parcels and within the existing vineyard area, for the ranch/farm headquarters site. Future development of this use would be subject to a separate review or permit required by the specific use standards for such use.

Within the 285-acre agriculture/open space parcel, the Agricultural Lands Clustering provisions also allow agricultural accessory structures and processing uses essential to the continuing agricultural production. No specific accessory structures or processing uses are proposed at this time, and any such future use would be subject to review and permitting as required by the County Land Use Ordinance. The applicant has shown an area suitable for agricultural processing near the center of the existing vineyards where an existing agricultural accessory building and water tank are located.

Figure 5 shows the locations of the various uses proposed for the project site. The major project components are also described in greater detail below.

2.5.2 Project Components

The primary components of the proposed project include 13 residential lots and associated infrastructure, as well as agricultural and natural open space areas. The project's infrastructure/access components include new roads, as well as water, wastewater, and drainage infrastructure. The project's open space and agriculture operations would include maintaining the existing vineyards and proposed vineyards, and the preservation of most of the grassland and oak woodland on the steeper southern portion of the property.

2.5.3 Land Use/Density

This section describes physical development of structures proposed on the site.

1. **Residential Lots**. Thirteen residential lots are proposed, each of which would be approximately one acre in size. This number of lots was derived from the provisions in the County Land Use Ordinance in place at the time the Vesting Tentative Tract Map was accepted for processing in 2001 (vesting maps are subject to standards and regulations in place at the time the map is accepted for processing). The standards set forth in the Land Use Ordinance in 2001 allowed a 20-acre minimum lot size for any type of irrigated agricultural use. With approximately 145 acres in vineyards, this provision allows 7 lots. The Agricultural Lands Cluster provision of the Land Use Ordinance (Section 22.22.152.C.2), allows a 100 percent bonus to be added to this number, and requires that 95 percent of the gross site area be retained in agriculture and/or natural open space. The project as proposed would be within the allowable lot total, and would

limit the residential and infrastructure development to no more than 5 percent of the site, and would meet the minimum lot size requirement of 10,000 square feet. Current Land Use Ordinance provisions related to the Agriculture category require that a proposed agricultural cluster project qualify based on the actual agricultural use or soil type which would equate to fewer parcels for this particular site based on a 40 acre minimum parcel size for irrigated vineyards (Sections 22.22.040 B and C).

Table 4 below provides a summary of lot sizes, based on the development area statistics provided on the Vesting Tentative Tract Map. Minor variations from these lot sizes may be expected, as the design is refined and adjustments made to ensure compliance with the code requirements.

Table 4 Proposed Development Area

	Gross Area		Net Area	
Lot No.	**Square Feet**	**Acres**	**Square Feet**	**Acres**
1	43,554	1.00	38,980	0.89
2	43,559	1.00	39,200	0.90
3	43,642	1.00	38,831	0.89
4	43,589	1.00	32,404	0.74
5	43,536	1.00	38,090	0.87
6	43,552	1.00	43,552	1.00
7	43,584	1.00	38,803	0.89
8	43,584	1.00	38,803	0.89
9	43,662	1.00	36,527	0.84
10	43,556	1.00	43,556	1.00
11	43,567	1.00	43,567	1.00
12	43,560	1.00	43,560	1.00
13	43,565	1.00	43,565	1.00
Subtotal for lots	**566,510**	**13.00**	**519,438**	**11.92**
Cul-de-sac	42,597	0.98	42,597	0.98
Lot 4-5 driveway	9,365	0.21	9,365	0.21
Lot 10-11 driveway	40,257	0.93	40,257	0.93
Lot 12-13 driveway	8,712	0.20	8,712	0.20
Total for lots and infrastructure		**15.32**		**14.24**
% of total lot acreage		**5.1%**		**4.80%**

2. **Development Standards.** The proposed lots would each allow one single-family detached residential unit (refer to Figure 5).

The proposed lots would be clustered in the southeastern portion of the site, with lots 1 through 11 located outside of the Sensitive Resource Area (SRA) combining designation. Lots 12 and 13 are proposed to be located in the SRA. Future development on these two lots within the SRA would be subject to the development standards for the SRA combining designation. This SRA combining designation was established because of the visual qualities of the hills and the scenic backdrop they provide when viewed from area roadways – particularly SR 227. All structures on lots 1 through 11

would be located outside of the SRA, at the lower elevations of the hillsides forming the southern boundary of the project site.

The height of all structures would be limited to 24 feet based on the applicant's project description and computed from the average of where the highest and lowest points of contact between the natural ground and building structure occur. This proposed height would not exceed the 35 foot maximum height requirement in Section 22.10.090.C of the County's Land Use Ordinance.

A buffer would be provided between the proposed residential building envelopes and the nearest existing and proposed vineyards on the property. The minimum distance of this buffer would be 330 feet, which includes a 30-foot setback within the proposed residential lots and a 300-foot distance between the residential lot line and the nearest vineyard use. The proposed lots would be intended for development by individual custom home builders.

The project would incorporate a Home Owner's Association (HOA) in accordance with the requirements of the Agricultural Lands Clustering Ordinance (Section 22.22.150.B.10 of the Land Use Ordinance). The proposed new residences would be guided by the HOA's codes, covenants and restrictions (CC&Rs) for height, color, landscaping, and exterior lighting. These specifications would either be consistent with, or more restrictive, than the property development standards applicable to the project from the County Land Use Ordinance.

2.5.4 Infrastructure

This section describes infrastructure (including roadways and grading) proposed within the project area (refer to Figure 5).

1. **Roadway Access**. As depicted on Figure 5, access to the subdivision would be from a cul-de-sac off of Greystone Place, which is adjacent to the southeastern portion of the site. Greystone Place connects with Los Ranchos Road which provides access to SR 227 (Edna Road) and therefore access to the City of San Luis Obispo to the north and the City of Arroyo Grande to the south. The proposed cul-de-sac road would provide direct access to proposed lots 1 through 3 and 7 through 9. At the end of the proposed cul-de-sac, a common driveway would serve lots 4 through 6, and a private gated access drive would be constructed to serve proposed lots 10 through 13.

   The proposed cul-de-sac extending from Greystone Place would be built to County 2014 Public Improvements Standards for rural roads and 2014 Standard Construction Drawing A-1. The road would be privately maintained by the proposed HOA. No on-site sidewalks or bicycle lanes are proposed. All proposed internal roadways and individual and common residential lot driveways would be constructed to County Public Works Department and California Department of Forestry and Fire Protection (CAL FIRE)/San Luis Obispo County Fire Department standards.

   Emergency access routes would also be provided to and from the site. One emergency access route would be via Ketzel Lane off of Los Ranchos Road near the intersection of Los Ranchos Road and SR 227. A second emergency access would be provided through an existing farm road easement located across from the terminus of Hacienda Avenue at Caballeros Avenue in the Rolling Hills subdivision north of the project site.

2. **Water Infrastructure.** Currently, there is no existing potable water infrastructure onsite. The proposed residential subdivision would be served by Golden State Water Company, a community water supplier. Golden State Water Company would utilize an existing mainline which currently serves the Rolling Hills development and San Luis Obispo Country Club and

Estates from Greystone Place to the proposed residential units with a new eight-inch water main. Fire hydrants would be installed in accordance with County standards and CAL FIRE/San Luis Obispo County Fire Department requirements. A landscape irrigation system separate from the existing vineyard water system would be used for the proposed new residences.

3. **Wastewater Infrastructure.** Currently, there is no existing sanitary sewer infrastructure onsite. Annexation into County Service Area 18 (CSA 18) is proposed for sewer service to all proposed lots. The project would provide for wastewater collection lines within the project site and upgrades to the existing wastewater collection and treatment system, consistent with the "will serve" letter prepared by the County Department of Public Works dated February 21, 2017. Domestic wastewater would be collected in a below-grade collection system and transported to the CSA 18 facility through connection to the existing sewer line in Greystone Place. A wet weather storage pond would be provided on the property, along the northwest boundary as shown on Figure 5. Additional improvements within the CSA wastewater treatment facility would occur within pond 2, and the applicant would have to provide an increment of funding to upgrade the influent grinder at the plant. The wet weather storage pond is part of the project and shown on the site plan, and all other improvements would be within existing CSA easements and facilities.
4. **Drainage Infrastructure.** The project includes drainage control via conveyance to natural on-site channels and swales, including a series of Low Impact Development (LID) features that would hold stormwater runoff to help avoid any increases in peak runoff, allow for groundwater recharge, and improve quality stormwater runoff. The LID features would be maintained by the proposed HOA. Any site runoff would ultimately be conveyed to a tributary of Davenport Creek near the center of the property.

   At the proposed roadway creek crossing, a trapezoidal fill would be placed in the channel with an appropriately sized pipe to accommodate anticipated design flows. The entrance and exit area of the pipe would be stabilized with appropriately sized rock erosion protection or similar armoring.

Table 5 summarizes the various services and providers that would be provided to the future residents of the project subdivision.

Table 5 Public Services Provided to the Project

Public Service	Provider
Water Supply	Golden State Water Company
Sewage	Proposed for annexation into County Service Area (CSA) 18 (Country Club)
Fire	CAL FIRE/San Luis Obispo County Fire Department
Police	San Luis Obispo County Sheriff's Department
School	San Luis Coastal Unified School District
Electric	Pacific Gas & Electric Company (PG&E)
Gas	The Gas Company
Telephone	AT&T

2.5.5 Grading and Construction

Earthwork for the project would include grading for roads, residential lots, and fill areas. All of the grading and infrastructure would be completed when roadways and utilities are constructed. Grading would be conventional, and would involve standard blade scrapers, graders, loaders, back hoes, trucks and similar equipment. No blasting or pile driving is anticipated. Currently, access to the project site is provided along the narrow private road (Ketzel Lane) that runs between Los Ranchos Road near SR 227 to the project site. Additional access for some construction vehicles may be provided where Greystone Place enters the southern part of the project.

2.5.6 Open Space/Agricultural Preservation Components

The project will include an agriculture/open space parcel of 285 acres (approximately 95 percent of the gross site area). The agriculture/open space parcel will be placed into a recorded, permanent agricultural open space easement granted to the County and included in the Williamson Act Agricultural Preserve Program. The project would also reserve the right to establish a 2.5 acre ranch headquarters envelope, including one of the allowed primary residences and up to five acres of aggregate area of agricultural accessory/processing uses on the agriculture/open space parcel as allowed by the Land Use Ordinance.

2.5.7 Buildout Characteristics

As noted above in Section 2.5.1, with the provisions of the Agricultural Lands Clustering section of the Land Use Ordinance, a total of up to 14 residences could be developed on the property. As proposed, the project would include 13 cluster residential lots. In the future, one primary dwelling and agricultural processing and support uses could be developed on the agriculture/open space parcel with appropriate land use review at that time. The residential lots would be clustered to the southwestern portion of the site. In all, about 14.93 acres would support the proposed residential components including residential units and infrastructure. The number of dwellings allowed is one dwelling unit per parcel.

Based on a population generation factor of 2.52 persons per unit, the 13 proposed residential units would increase the local population by 33 persons (California Department of Finance [DOF] 2017).

2.6 Project Objectives

In general, the project is intended to implement the planning and development goals of the County and, thus, to be consistent with the development parameters described in the County's General Plan. The following points summarize the project objectives for the County of San Luis Obispo, acting as the CEQA Lead Agency and primary jurisdiction over the project. These objectives are from the San Luis Obispo County General Plan Land Use and Circulation Element (Part II), The Area Plans, Chapter IV. San Luis Obispo Area Plan. The proposed Jack Ranch SLO Agricultural Cluster Project is within the San Luis Obispo Sub Area North.

The overall vision statement for the San Luis Obispo Sub Area North (Section 1.6) is:

> The sub-area should maintain a rural character in harmony with agriculture, business, recreational, environmental, and residential opportunities.

Specific goals that relate to the orderly implementation of the Land Use and Circulation Element are also listed in the San Luis Obispo Area Plan. Specific goals, some of which include implementation steps, which are related to development in agricultural and rural lands, are summarized as follows:

Environment

- Protect and, where it has been degraded, enhance wildlife habitat areas.
- Protect the scenic values of natural landforms.
- Protect natural drainage channels and floodways in their natural condition to the maximum extent feasible.

Distribution of Land Uses

- Devote the remainder of the planning area to a "greenbelt" consisting of production agriculture and low-density development. (Also see Framework for Planning).

Economy

- Encourage economic development balanced with the natural resources that enhance the natural beauty and character, and supports the social and environmental health of the planning area.

The project area is also within the San Luis Obispo Greenbelt identified in the San Luis Obispo Area Plan (San Luis Obispo County, February 2014, The Area Plans, Figure 4-2). The purpose of the Greenbelt is to preserve scenic resources associated with the hillsides forming the backdrop for much of the plan area, and to help maintain the distinction between the urban uses associated with lands in and adjacent to the City of San Luis Obispo, with the agricultural and rural lands in the unincorporated areas. The Agricultural Lands Clustering provision of the Land Use Ordinance is one of the incentive based tools identified in the San Luis Obispo Area Plan for the purpose of helping to achieve the San Luis Obispo Greenbelt. Thus, one of the specific objectives of County in considering the Jack Ranch SLO Agricultural Cluster Project is to use the Agricultural Lands Cluster provision to secure 95 percent of the project site in permanent agricultural uses and natural open space, while protecting the scenic views in the project vicinity.

Under the provision of the Agricultural Lands Cluster standards (as set forth in the ordinance in effect in 2001 when the project was accepted for processing) a 100 percent density bonus is allowed in exchange for preserving a minimum of 95 percent of the site as agricultural and natural open space. The applicant is requesting a 100 percent density bonus thereby allowing up to 14 residential units on the site under the Land Use Ordinance. Based on Sections 22.22.040 (Agricultural Category), 22.22.050 (Rural Lands Category), and 22.22.150 (Agricultural Lands Clustering), the site qualified for a 14 residential unit subdivision is allowable for the site given the agriculture and open space lands within the project boundaries.

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. The primary discretionary approvals by the County are as follows:

- Vesting Tentative Tract Map (VTM) to subdivide the property into 13 residential lots and one 285-acre agriculture/open space parcel; and
- Conditional Use Permit (CUP) to allow for a Major Agricultural Cluster project, as defined in Section 22.22.150 of the Land Use Ordinance.

Lot development will require approval of building permits and future ranch headquarters and agricultural accessory and processing uses will require approval of a discretionary land use permit. Such permits are not being requested at this time.

Other public agencies whose approval may be required include:

- Airport Land Use Commission – review of the proposed development within the Airport Influence Area of the San Luis Obispo County Airport
- Local Agency Formation Commission – Annexation into CSA 18
- Army Corps of Engineers – Nationwide or Individual permit (depending on acreage of total wetland disturbance)
- Regional Water Quality Control Board – Section 401 Water Quality Certification, in the event there is an Army Corps of Engineers permit
- Regional Water Quality Control Board – Stormwater Pollution Prevention Plan (SWPPP) review and approval
- Regional Water Quality Control Board and/or State Water Resources Control Board – review of and/or modification to Recycled Water Requirements Order applicable to the County Service Area 18 Country Club Estates wastewater treatment facility (Order No. R3-2003-0004)
- California Department of Fish and Wildlife –Streambed Alteration Agreement

2.8 Project Alternatives

As required by Section 15126(d) of the *CEQA Guidelines*, this EIR will examine three alternatives to the proposed project. Three alternatives are identified, which examine a range of development intensities and configurations. This EIR examines the following alternatives, which are described more fully in Section 6.0, Alternatives:

Alternative 1: No Project. This option assumes that the project is not constructed, and that the current irrigated vineyards continue in accordance with all applicable County policies.

Alternative 2: Conventional Subdivision. This option may be expected to occur in the future, if the No Project alternative occurs now. A conventional subdivision could include up to seven residential lots in the Agriculture land use category and up to three lots in the Rural Lands land use category, with each lot allowing two primary residences for a total of 20 residential units allowed. The lot sizes would vary in the Agriculture category, based on soil type and intensity of agricultural use and the degree to which clustering of lots may be pursued to maximize the retention of agricultural land even if no bonus density is sought. In the Rural Lands category, the lot size would typically be 20 acres.

Alternative 3: Reduced Project. This alternative would involve a reconfiguration of the project to eliminate lots 12 and 13, which would reduce the overall visibility of the project from SR 227 and from lands to the north. A reconfiguration or other adjustment to reduce the scope of the project could also be considered under this alternative, in response to specific environmental issues.

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3 Environmental Setting

This section describes the general environmental setting in the vicinity of the project site. Specific description of the setting in each of environmental issue areas being studied in this Environmental Impact Report (EIR) can be found in the relevant chapters of Section 4.0, Environmental Impact Analysis.

3.1 Regional Setting

The project site is located in the unincorporated area of San Luis Obispo County. San Luis Obispo County is located in the central coast region of California and is bounded by the Pacific Ocean to the west, Monterey County to the north, Kern County to the east, and Santa Barbara County to the south. As a region, San Luis Obispo County is moderately urbanized, but remains as a generally low density, rural and agricultural area of California that has grown as a major tourist destination. The County covers approximately 3,600 square miles, and contains approximately 280,101 residents (DOF 2016). The County is topographically diverse, with mountains, rich agricultural valleys, and distinct urban areas, all within close proximity to the Pacific Ocean. The Mediterranean climate of the region produces moderate average temperatures year round, although extreme temperatures can be reached in the winter and summer. The warmest month of the year is September with an average maximum temperature of 77 degrees Fahrenheit, while the coldest month of the year is January with an average minimum temperature of 41.3 degrees Fahrenheit with rainfall is concentrated in the winter months (Western Regional Climate Center 2016).

3.2 Project Site Setting

The 299-acre project site is located within the unincorporated portion of the County of San Luis Obispo, approximately 2.5 miles south of the City of San Luis Obispo. The project site is bordered by Caballeros Avenue on the northeast (Rolling Hills development), Greystone Place to the east (San Luis Obispo Country Club Estates), and large lot agricultural land to the south and west. The site is comprised of assessor's parcel number (APN) 044-081-040. Figure 3 (in Section 2.0, *Project Description*) shows the regional location of the project site within its local context.

General Site Characteristics

The project site has been historically used for agricultural purposes, primarily as grazing and more recently, irrigated vineyards. Topographically, the site consists mostly of rolling hills that rise steeply to the north culminating in four prominent hilltops. The elevation ranges from 180 feet above mean sea level (msl) in the tributary to Davenport Creek to 625 feet msl at the hilltop located on the southern edge of the parcel.

Geologic Setting

According to the San Luis Obispo Planning Area Land Use and Combining designation Maps, the project site is not located in a County-designated Geologic Study Area (GSA). The greater San Luis Obispo area is located in the Coast Ranges geomorphic province, which is characterized by

northwest-trending, elongated mountain ranges separated by narrow valleys. The project site is located on the northern slopes of the San Luis Range, a rugged upland range that bounds the southwestern margin of San Luis Valley. The project lies between San Luis Creek and Arroyo Grande Creek, both of which flow southwestward through the San Luis Range to the Pacific Ocean.

The project site is not within a State-designated Earthquake Fault Hazard Zone, and no faults have been previously mapped across the property by regional geologic mappers. However, traces of the Los Osos Fault and Edna Fault are mapped in the vicinity (Geoinsite, Inc. 2016; Appendix E).

Natural and Cultural Resources

The project site contains several native and non-native habitat types. On-site native habitat types include Oak Woodland, Wetlands, and Riparian. On-site non-native habitat types include non-native annual grassland and agriculture. Areas likely to be under the jurisdiction of the U. S. Army Corps of Engineers (Corps) and/or California Department of Fish and Wildlife (CDFW) include the unnamed drainage which bisects the proposed development area and the wetlands outside of the proposed development area. Because of the many habitat types on the project site, a diverse assemblage of birds and mammals utilize the site.

A previously recorded fossil site (LACM locality 7454) occurs on the parcel, but well outside the area proposed for development or other ground disturbance. This site is a bonebed that has yielded abundant fossilized bones and teeth representing a diversity of marine vertebrate species and birds. However, there was no artefactual or historical evidence found on the project site.

3.3 Cumulative Development

A project's cumulative impacts are the possible environmental effects that may be cumulatively considerable when considered with other reasonably foreseeable projects [Section 15065 (a)(3) of the California Environmental Quality Act Guidelines (*State CEQA Guidelines*)]. Cumulatively considerable impacts occur when the incremental effects of a particular project or program are significant when viewed in connection with the effects of other past, current, or probable future projects or programs that are not incorporated into baseline or existing conditions.

As defined in Section 15355 of the *State CEQA Guidelines*, a cumulative impact consists of an impact which is created as a result of the combination of the project evaluated in the EIR together with other projects causing related impacts. According to Section 15130 of the *State CEQA Guidelines*, the discussion of cumulative impacts must reflect the severity of the impacts and their likelihood of occurrence, but the discussion need not provide as great of detail as provided for the effects attributable to the project alone. The discussion should be guided by standards of practicality and reasonableness, and should focus on the cumulative impact to which the identified other projects contribute rather than the attributes of other projects that do not contribute to the cumulative impact. Impacts that do not result in part from the project evaluated in the EIR need not be discussed.

The impact sections of this EIR discuss the potential cumulative environmental impacts resulting from the proposed project in association with other planned, pending, and reasonably foreseeable projects in the vicinity of the project area. The cumulative impacts discussion considers the contribution to environmental effects of the proposed Vesting Tentative Tract Map and Conditional Use Permit to allow for a Major Agricultural Cluster project.

Table 6 summarizes the approved and pending projects in the general vicinity of the project site. The cumulative projects in the vicinity of the project site, including the City of San Luis Obispo Avila Ranch Project, include 720 dwelling units and over 428,737 square feet of non-residential uses.

Table 6 Cumulative Projects List

Project Permit No.	Land Use	Project Location (APN)	Description
SUB2015-00002	Commercial Service	076-512-010	Split 2.29-acre (ac) parcel into one 1.0-ac parcel and one 1.29-ac parcel
SUB2015-00058	Commercial Service	076-512-008	Parcel map to create 3 parcels of 1.3 ac, 1.2 ac, and 1.3 ac
SUB2015-00059	Single Family Dwelling Units	044-082-052	Tentative parcel map to divide one parcel of 7.9 ac into three parcels of approximately 1.4 ac, 1.4 ac, and 5.0 ac
DRC2015-00054	Office	076-512-001	12,400 square foot administrative building
DRC2015-00142	Fast Food with Drive Thru	076-512-024	3,916 square foot restaurant with drive thru
DRC2015-00141	Mini Storage	076-511-015	116,000 square foot mini storage facility
DRC2015-00093	Warehouse and Office	076-512-003	11,350 square foot office/warehouse building
DRC2015-00013	Warehouse	076-512-037	19,664 square foot warehouse (Food Bank)
DRC2015-00056	Warehouse	076-512-038	14,389 square foot warehouse
DRC2016-00041	Self-Service Storage Facility	076-063-034	166, 521 square foot office/storage facility
DRC2016-00009	Warehouse and Office	076-512-025	24,227 square foot office/warehouse building
DRC2016-00009	Commercial Service Condominiums	076-512-025	45,270 square foot condominiums
Avila Ranch (City of San Luis Obispo)	Residential, Commercial, Agriculture, Open Space	053-259-004 053-259-005 053-259-006	720 dwelling units, 15,000 square feet of retail/office development
Total Residential			**720 units**
Total Commercial			**428,737 square feet**

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4 Environmental Impact Analysis

This section discusses the possible environmental effects of the proposed project for the specific issue areas that were identified through the Notice of Preparation (NOP)/Scoping process as having the potential to experience significant impacts.

"Significant effect" is defined by the *State 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. Within the impact analysis, the first subsection identifies the methodologies used and the "significance thresholds," which are those criteria adopted by the County, other agencies, universally recognized, or developed specifically for this analysis to determine whether potential effects are significant. The next subsection describes each impact of the proposed site development, 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, with the discussion of the effect and its significance following. Each bolded impact listing also contains a statement of the significance determination for the environmental impact as follows:

Class I. Significant and Unavoidable: 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 §15093 of the CEQA Guidelines.

Class II. Significant but Mitigable: 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 §15091 of the CEQA Guidelines.

Class III. Not Significant: 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: An effect that would reduce existing environmental problems or hazards.

Following each environmental impact discussion is a listing of mitigation measures (if required) and the residual effects or level of significance remaining after the implementation of the measures. In those 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 future development in the area. Please also refer to the *Executive Summary* of this EIR, which clearly summarizes all impacts and mitigation measures that apply to the project.

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4.1 Aesthetics

This section is based in part on review of *Jack Ranch Visual Simulation and Study* prepared for the project by Firma Landscape Architects in September 2016 (refer to Appendix B).

4.1.1 Setting

The Jack Ranch SLO Agricultural Cluster Project is a proposed 13-unit single-family development on an approximately 299-acre site (298.56 acres based on map records). The project site is located within the County of San Luis Obispo, approximately 2.5 miles south of the City of San Luis Obispo. The project site is within the County's San Luis Obispo Area Plan (San Luis Obispo Sub Area North), and includes the Agriculture and Rural Lands land use categories, with the Sensitive Resource Area (SRA) combining designation over the hillsides in the southern portion of the site. The project site is bordered by Caballeros Avenue on the northeast (Rolling Hills development), Greystone Place to the east (San Luis Obispo Country Club Estates), and large lot agricultural land to the south and west. The project site is currently accessed for on-site agricultural operations via Ketzel Lane off of Los Ranchos Road near the intersection of Los Ranchos Road and Edna Road (State Route [SR] 227) and via Greystone Place through the Country Club Estates community.

a. Existing Conditions

The visual character of the project area is a combination of natural and built environment. Portions of the rural area are visually intact as natural and agricultural countryside. In recent years, the agricultural landscape has been transitioning from predominantly ranchlands to an increasing number of vineyards and related winery and residential development. In general, most development is located along or near the SR 227 corridor. The area contains several prominent north-south trending ridges that reach elevations of approximately 700 feet above mean sea level (msl). Oak woodlands are a prominent feature throughout the area.

Although residential developments border the project site on the north and east, the character of the project site is predominantly rural with open space and agricultural areas. The site currently consists of irrigated vineyards on the northeast portion of the site and undeveloped rolling hills with oak trees on the southwestern portion of the site. Dominant features include the gentle rolling land scattered with non-native grasslands and sparse oak woodland, and one drainage canyon which drains the southern side of the property and joins a trending tributary of Davenport Creek near the center of the property. An unnamed drainage also exists near the northwest corner of the site. The site ranges in elevation from approximately 200 feet above msl at Davenport Creek to approximately 600 feet above msl on the southern edge of the parcel.

b. Visual Resources

According to the County of San Luis Obispo General Plan Conservation and Open Space Element, visual resources within San Luis Obispo County are scenic areas that are important aspects of the quality of life for residents and visitors. Visual resources are easily viewed landscape scenes that are valued for their natural or agricultural features and vegetation, including hills, mountains, and rock outcrops. Visual resources are also defined by the view opportunities that people enjoy from public viewpoints, vista points, and scenic roads and highways.

Viewpoints

Viewpoints are defined as parks, plazas, beaches, streets, trails, and private property, from which visual resources can be viewed. Viewpoints in the vicinity of the project site include streets and private residences in the Rolling Hills development and San Luis Obispo Country Club Estates to the northeast, and east of the site, respectively.

Vista Points

Vista points are specialized viewing areas near roads or highways. The term "vista" generally implies an expansive view, usually from an elevated point or open area. The project site is not located within any County-designated scenic vistas. However, the southern portion of the site is located within a County designated Sensitive Resources Area (SRA). The SRA combining designation has been designated for the following purposes relative to scenic resources in the County:

- To enhance and maintain the amenities accruing to the public from the preservation of the scenic and environmental quality of San Luis Obispo county; and
- Provide locational and design guidelines for siting development that may occur within SRAs, and encourage development to occur outside of SRAs whenever possible so as to preserve the scenic and environmental qualities of San Luis Obispo County, while retaining the ability to establish proposed land uses and minimum parcel sizes as allowed by the Land use Ordinance.

In the vicinity of the project site, the SRA combining designation relates to the visibility of the hillsides from SR 227. For the most part, however, intervening hills and existing vegetation block views of project site from SR 227.

Scenic Roads and Highways

Scenic roads and highways are defined as corridors that provide viewing opportunities. Several roadways and roadway segments in the vicinity of the project site have been identified in the County General Plan Conservation and Open Space Element as suggested scenic corridors. However, no suggested scenic corridors are designated along the roadway segments from which the site is visible. In addition, the California Scenic Highway Program, maintained by the California Department of Transportation (Caltrans) protects State scenic highway corridors from changes that would diminish the aesthetic value of lands adjacent to these highways. The project site is not located within view from any designated or eligible State scenic highways.

SR 227 Viewshed

SR 227 is a north-south arterial located northeast of the project site. Views from this roadway to the southwest toward the project site currently consist of rural residential uses in the foreground, agricultural and rural residential uses in the middle ground, and rolling foothills in the background.

c. Light and Glare

Nighttime lighting conditions vary throughout the County, from heavily lit areas of commercial development to more rural areas with little nighttime lighting. There is no street lighting on the project site and minimal lighted nighttime activity on the site associated with agricultural operations. Lighting and glare levels in the project vicinity (i.e., surrounding the site) are typical of suburban areas. The majority of light and glare in the project vicinity is generated by residential uses

in the developments to the north and east of the site. Vehicle headlights, street lighting at intersections and along the streets, and building lighting contribute to the existing light setting to the north and east of the project site.

d. Regulatory Setting

The County of San Luis Obispo regulates the design of the built environment through the policies and requirements contained in the following documents.

- The San Luis Obispo County General Plan, including the Land Use and Circulation Elements (LUCE), the Conservation and Open Space Element (COSE), and the Agriculture Element;
- The County Land Use Ordinance, Title 22 of the County Code;
- Countywide Design Guidelines; and
- The California Environmental Quality Act Statutes and Guidelines (*State CEQA Guidelines*).

The Visual Resource chapter of the Conservation and Open Space Element establishes specific goals and policies designed to maintain the County's scenic resources. Relevant goals and policies are identified below in Table 7.

Table 7 Relevant Conservation and Open Space Element Policies

GOAL 1: The natural and agricultural landscape will continue to be the dominant view in rural parts of the County.	
Policy VR 1.1	*Adopt Scenic Protection Standards.* Protect scenic views and landscapes, especially visual Sensitive Resource Areas (SRAs) from incompatible development and land uses.
GOAL 2: The natural and historic character and identify of rural areas will be protected.	
Policy VR 2.1	*Develop in a manner compatible with Historical and Visual Resources.* Through the review of proposed development, encourage designs that are compatible with the natural landscape and with recognized historical character, and discourage designs that are clearly out of place within rural areas.
Policy VR 2.2	*Site Development and Landscaping Sensitively.* Through the review of proposed development, encourage designs that emphasize native vegetation and conform grading to existing natural forms. Encourage abundant native and/or drought-tolerant landscaping that screens buildings and parking lots and blends development with the natural landscape. Consider fire safety in the selection and placement of plant material, consistent with Biological Resources Policy BR 2.7 regarding fire suppression and sensitive plants and habitats.
Policy VR 2.3	*Revise Countywide Design Guidelines.* New development should follow Countywide Design Guidelines to protect rural visual and historic character. The guidelines should encourage new development that is compatible with public views of scenic areas, the natural landscape, and existing environment.
GOAL 3: The visual identities of communities will be preserved by maintaining rural separation between them.	
Policy VR 3.1	*Identify and Protect Community Separators.* Identify community separators and propose land use strategies and development standards to maintain separate, identifiable cities and communities with intervening rural land. Involve landowners and communities in this process. Identification and designation of Community Separators shall not interfere with agricultural uses on private lands consistent with AGP 30.
Policy VR 3.2	*Community Involvement.* Encourage communities adjacent to Community Separators to maintain a sense of place and separation through education about the importance of separators. Community advisory groups or nonprofit organizations could lead these efforts.
Policy VR 3.3	*Conservation Tools.* Collaborate with community advisory councils, cities, landowners, and non-profit conservation organizations to propose voluntary scenic, agricultural, or conservation easements and/or greenbelt programs that support private landownership while retaining the visual resources within community separators.

Policy VR 3.4	*Community Edges.* Maintain clear community edges for urban and village areas with appropriate plan designations when updating community and area plans. Avoid suburban or low-density sprawl at the edges of communities.
Policy VR 3.5	*Annexation in Community Separators.* Avoid annexation of Community Separators or their inclusion in spheres of influence for sewer and water service.
GOAL 4: Protect visual resources within visual sensitive resource areas (SRAs) for scenic corridors.	
Policy VR 4.1	*Designation of Scenic Corridors.* Designate scenic corridors based on the recommendations for Scenic Corridor Studies, for the candidate roads and highways listed in Table VR-2. [In San Miguel, the only listed roadway is U.S. 101].
Policy VR 4.2	*Balance Protection.* Balance protection of scenic resources with the protection of biological and agricultural resources that may co-exist within the scenic corridor.
GOAL 6: A cohesive visual character will be maintained in urban areas.	
Policy VR 6.1	*Urban Design.* Ensure that new multi-family residential, mixed-use, and commercial or other non-residential development in the urban and village areas is consistent with the local character, identity, and sense of place.
GOAL 7: Views of the night sky and its constellations of stars will be maintained.	
Policy VR 7.1	*Nighttime Light Pollution.* Protect the clarity of the night sky within communities and rural areas, by ensuring that exterior lighting, including streetlight projects, is designed to minimize nighttime light pollution.
GOAL 8: Visual intrusions of signs will be minimized within public view corridors.	
Policy VR 8.2	*Information or Interpretive Signs.* Encourage creation of a system of roadside informational signs to meet the legitimate needs of motorists for tourist information. These signs should be constructed of materials compatible with the surrounding environment and the County's heritage.

4.1.2 Impact Analysis

a. Methodology and Significance Thresholds

The assessment of aesthetic impacts involves qualitative analysis that is inherently subjective in nature. Different viewers react to views and aesthetic conditions differently. This discussion evaluates the existing visual environment against the anticipated level of development with implementation of the proposed Jack Ranch SLO Agricultural Cluster Project. The following criteria are based on Appendix G of the *State CEQA Guidelines* and the County's Initial Study Checklist. An impact is considered significant if the project would result in one or more of the following conditions:

1. Create an aesthetically incompatible site open to public view;
2. Introduce a use within a scenic view open to public view;
3. Change the visual character of an area;
4. Create glare or night lighting, which may affect surrounding areas; and/or
5. Impact unique geological or physical features.

The Initial Study for the project determined that impacts to unique geologic or physical features would be less than significant. Refer to the Initial Study in Appendix A for a discussion of this issue.

b. Project Impacts

Threshold:	Would the project create an aesthetically incompatible site open to public view?
Threshold:	Would the project introduce a use within a scenic view open to public view?

Impact AES-1 **THE PROJECT WOULD NOT RESULT IN DEVELOPMENT AESTHETICALLY INCOMPATIBLE WITH THE SURROUNDING ENVIRONMENT NOR WOULD IT INTRODUCE A PROMINENT PUBLIC VIEW OF ANY ON-SITE USES. THEREFORE, POTENTIAL IMPACTS WOULD BE CLASS III, LESS THAN SIGNIFICANT.**

The project site is not visible from any designated or eligible State scenic highways or routes. The site is, however, intermittently visible from the SR 227 corridor. The site is also visible from the Rolling Hills development and San Luis Obispo Country Club Estates to the north and east of the site, respectively.

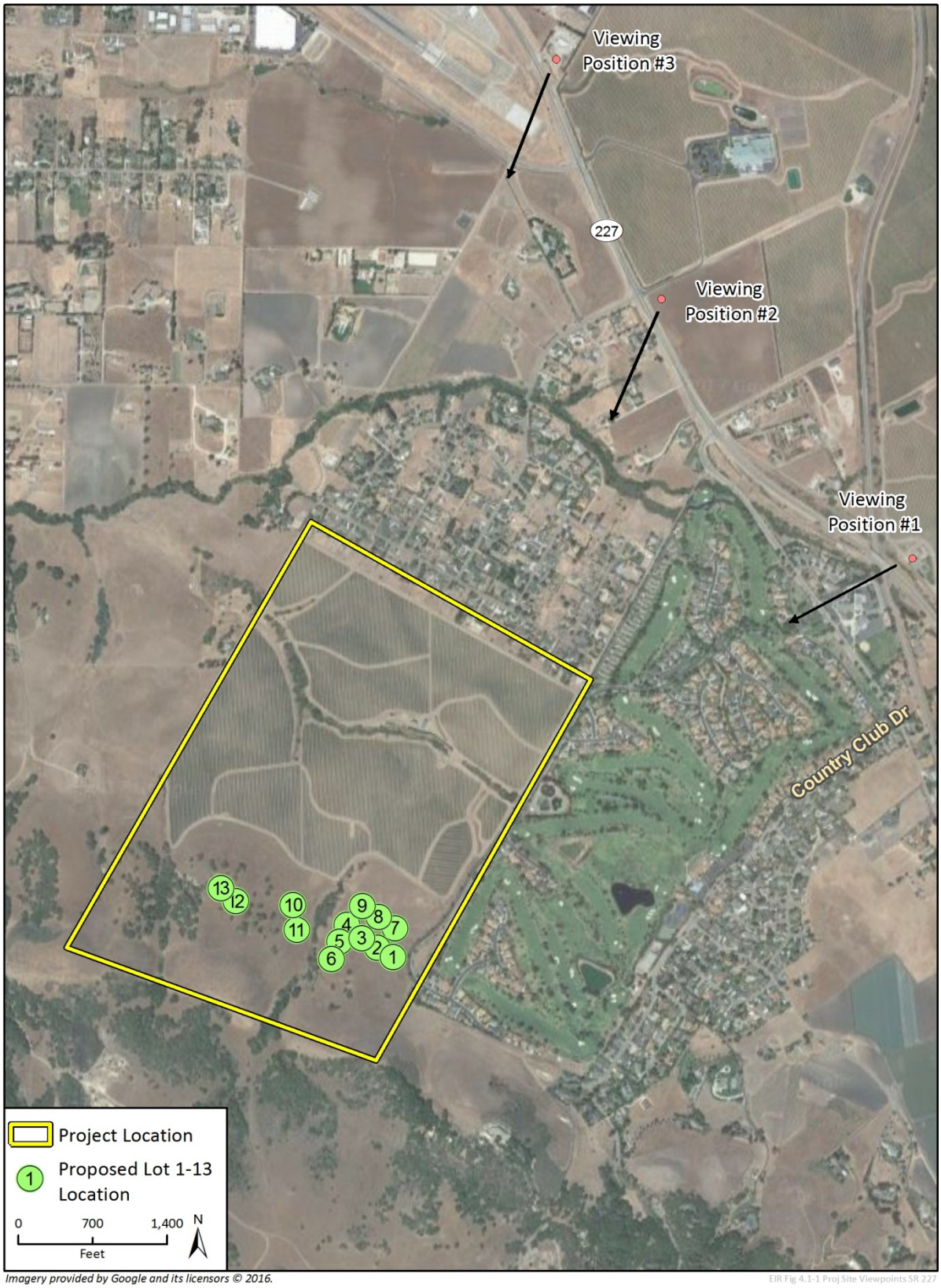
Photographs of views toward the project site were taken from three public vantage points along SR 227 (refer to Figure 7). Figure 8 through Figure 10, which include visual simulations of the project's proposed residential units on the landscape, show the visual conditions of the project site from the three viewing points. The exact architectural design for the residences is unknown at this time. As a reasonable estimation of the scale and color of the proposed residences, the digital model of the residences used in the visual simulations assumes:

- The height of the proposed residences would be limited to 24 feet in the front elevation based on the applicant's project description and computed from the average of where the highest and lowest points of contact between the natural ground and building structure occur. The final height of the ridgeline would be set in final plans in order to meet County Land Use Ordinance height limits depending on the average natural grade and the way the home is designed to be set into the landform.
- The residences would have an approximately 3,432 square foot footprint.
- The residences would use natural colors to blend into the natural landscape including sage greens, tan, brown, and grey.

As shown in the visual simulations, proposed residential lots 1 through 4 and 8 through 11 would not be visible from the identified public viewpoints along SR 227. Lots 5 and 6 would be partially visible from viewpoint 2 along SR 227, and lots 12 and 13 would be distantly visible from viewpoints 1 and 3.

Lots 1 through 11 within the development area would be oriented outside of the County-designated Sensitive Resource Area (SRA) while lots 12 and 13 would occur within the SRA. The County provides policies for the purpose of protecting scenic views and landscapes from incompatible development and land uses in the SRA. The proposed residential units would be limited to 24 feet in height and, in compliance with County policies, would not protrude above the ridgelines on the project site. The proposed residential units would also be consistent with the appearance, mass, and density of surrounding rural residential development. Furthermore, SR 227 is primarily used as a transportation corridor and views of the site while traveling within the corridor would be distant, intermittent, and brief, offering typical viewers limited views of the site. For these reasons, the project would not result in adverse impacts due to aesthetic incompatibility or new uses proposed within a scenic view. These potential impacts would be less than significant.

Figure 7 Project Site Viewpoints from SR 227



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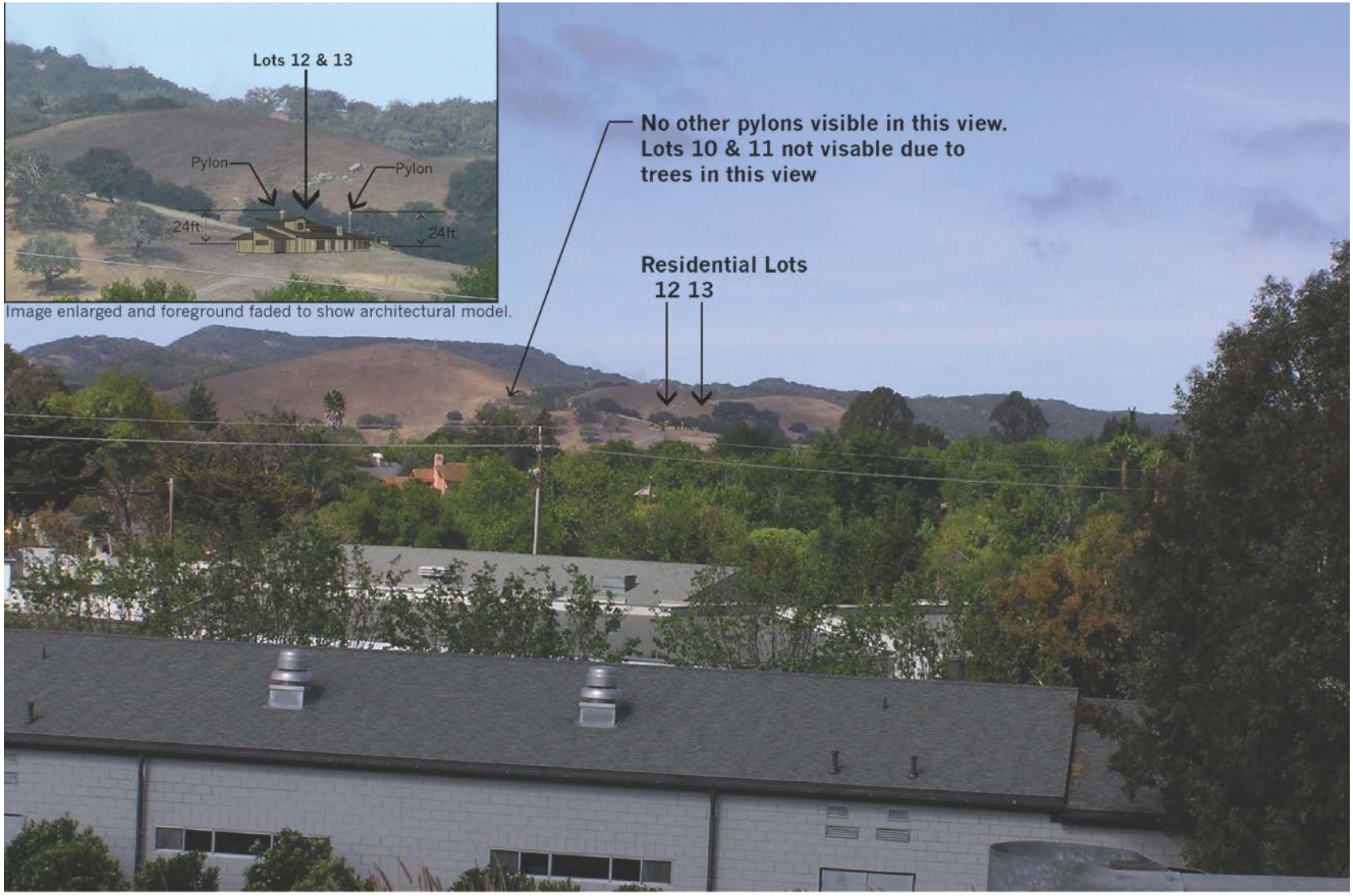
Additional data provided by Firma Landscape Architects, 2016.

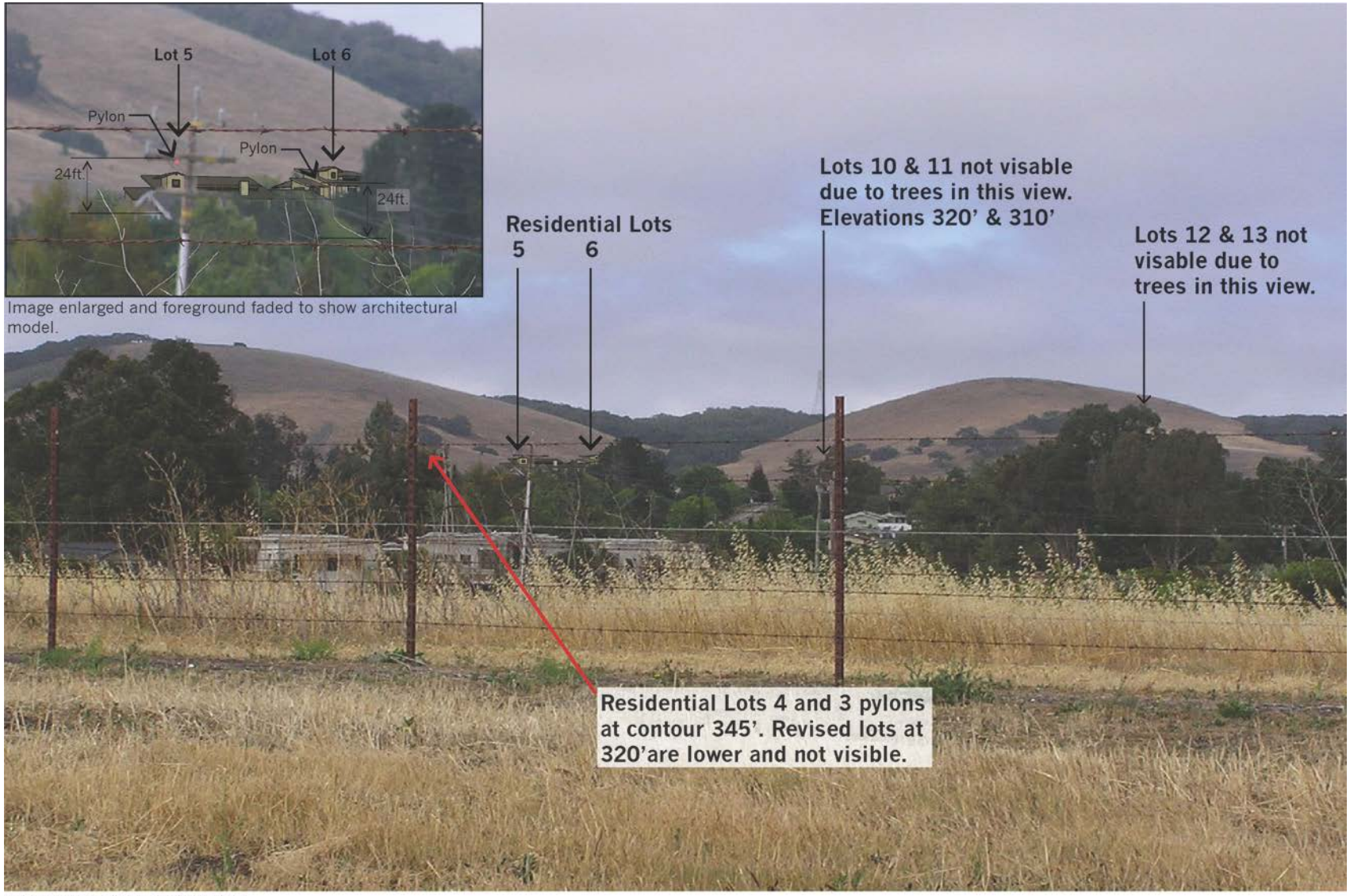
EIR Fig 4.1-1 Proj Site Viewpoints SR 227

Figure 8 View of Project Site from Viewpoint 1



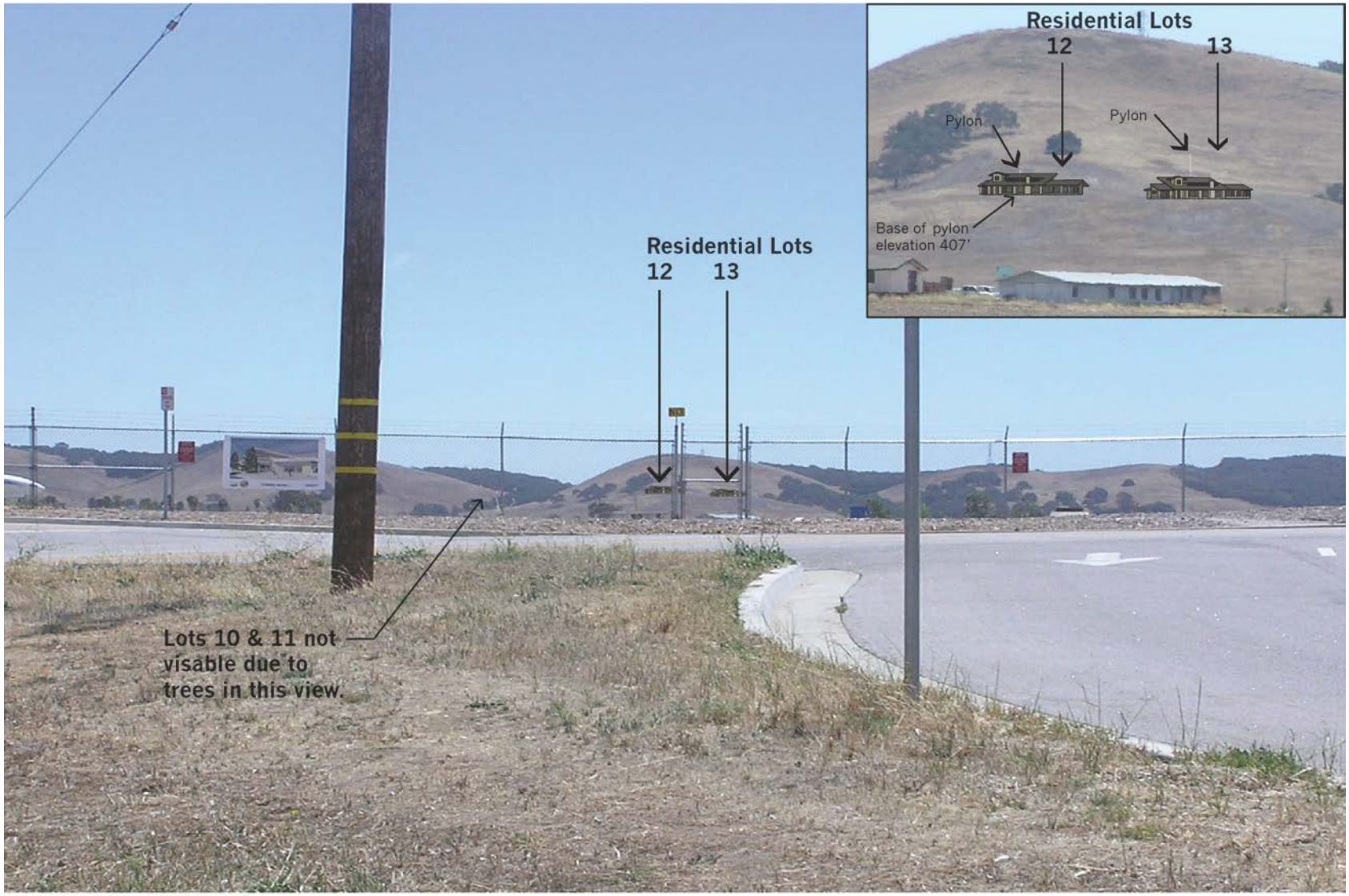
Source: Firma Landscape Architects, 2016.

Figure 9 View of Project Site from Viewpoint 2



Source: Firma Landscape Architects, 2016.

Figure 10 View of the Proejct Site from Viewpoint 3



Source: Firma Landscape Architects, 2016.

Threshold:	Would the project change the visual character of an area?

Impact AES-2 PROJECT COMPLIANCE WITH THE COUNTY'S AGRICULTURAL LANDS CLUSTERING ORDINANCE WOULD MAINTAIN THE EXISTING RURAL AGRICULTURAL CHARACTER ON THE MAJORITY OF THE SITE AND THE PROJECT WOULD BE SUBJECT TO THE SAME DEVELOPMENT PARAMETERS AS SURROUNDING DEVELOPMENT. THEREFORE, POTENTIAL IMPACTS TO THE VISUAL CHARACTER OF THE AREA WOULD BE CLASS III, LESS THAN SIGNIFICANT.

The proposed project would introduce a 13-unit agricultural cluster subdivision to a site that is primarily composed of undeveloped open space and agricultural uses. The proposed subdivision would alter the visual character of a small portion of the project site to a more developed condition. However, as described in Section 4.2, *Agriculture and Forest Resources*, the project would be subject to the County's Agricultural Lands Clustering Ordinance (Section 22.22.150 of the Land Use Ordinance). The intent of the Ordinance is to preserve and enhance agricultural uses, while allowing clustered residential development on large parcels. The Ordinance also requires that 95 percent of the gross site area be retained in agriculture and/or natural open space to which the project would comply. Project compliance with the Ordinance would maintain the existing rural agricultural character on the majority of the site. In addition, the clustered subdivision would be subject to the same development parameters as surrounding development. Therefore, the project would not result in an adverse change or degradation to the visual character of the area and impacts would be less than significant.

Threshold:	Would the project create glare or night lighting, which may affect surrounding areas?

Impact AES-3 ALTHOUGH THE PROJECT WOULD INTRODUCE NEW SOURCES OF NIGHT LIGHTING AND GLARE, COMPLIANCE WITH THE COUNTY'S EXTERIOR LIGHTING ORDINANCE WOULD REDUCE THE POTENTIAL NEGATIVE EFFECTS OF SUCH LIGHT AND GLARE ON SURROUNDING AREAS. THEREFORE, POTENTIAL IMPACTS WOULD BE CLASS III, LESS THAN SIGNIFICANT.

The future development of 13 single-family residences would introduce lighting to the project site which has little to no existing night lighting. Given the rural atmosphere and lack of lighting on the project site, new entry lights, interior lights, exterior lights, and landscape lights have the potential to result in ambient light pollution at nighttime. In addition, on-site building materials, roofing materials, and windows reflecting sunlight could produce glare. However, the project would be required to comply with the County's Exterior Lighting Ordinance (Section 22.10.060 of the Land Use Ordinance) requiring that light sources be designed and adjusted to direct light away from any road or street, and away from any dwelling outside the ownership of the applicant and prohibiting light or glare from being transmitted or reflected such that it is detrimental or harmful to persons, or interferes with the use of surrounding properties or streets. Therefore, the project would not substantially increase the level of lighting in the vicinity of the site, and impacts related to light and glare would be less than significant.

c. Cumulative Impacts

The visual character of the project area is a combination of natural and built environment. Portions of the rural area are visually intact as natural and agricultural countryside. In general, most development is located along or near the SR 227 corridor, with agriculture uses visible on the rolling hillsides beyond. Cumulative development within the vicinity of the project area (refer to Section 3.0, *Environmental Setting*) would result in a cumulative loss of open space and would alter the

character of the area from rural to semi-rural or suburban. However, the project would not substantially contribute to a change in the character of the site or area or adversely affect public views of scenic resources in the area. Furthermore, the project would result in preservation of 95 percent of the site in open space and agriculture. As such, the project would not result in a considerable contribution to cumulative aesthetic impacts and cumulative impacts would be less than significant.

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4.2 Agriculture and Forest Resources

4.2.1 Setting

a. Regional Agricultural Resources

California agriculture ranks first in the nation, with its farms and ranches having received $45.3 billion for their products in 2016 (California Department of Food and Agriculture [CDFA] 2016). California produces over 400 commodities and nearly half of all United States (U.S.) grown fruits, nuts, and vegetables on 25.5 million acres of farmland (CDFA, California Agricultural Statistics Review 2015-2016).

San Luis Obispo County and the Central Coast region are important key agricultural centers within the State. Wine grapes and strawberries lead a list of high value specialty crops grown in the County's fertile soils and Mediterranean climate. The region's agricultural industry is a crucial part of the local economy. It provides employment and income directly for those in agriculture, and it helps drive growth in the tourism industry, which in turn generates further economic activity and consumer spending. According to the County's 2016 Annual Crop Report, agricultural production has risen, with some fluctuation due to severe drought conditions, over the last 10 years from $638 million in 2007 to over $914 million in 2016. Wine grapes, strawberries, and avocados produced the most revenue, bringing in approximately $243 million, $241 million, and $45 million, respectively. Other crops in the County's top ten agricultural producers include broccoli, cattle and calves, vegetable transplants, cut flowers, head lettuce, cauliflower, and lemons (2016 Annual Report, San Luis Obispo County Department of Agriculture/Weights and Measures). Agricultural operations in the County provide 20,645 jobs.

b. Project Site Agricultural Resources and Associated Water Use

The project site includes approximately 145 acres of existing vineyards and associated access roads within the County's AG (Agriculture) land use category. An unnamed tributary to Davenport Creek crosses through the vineyards, draining east to west, and contains riparian habitat bordered by the vineyards. Existing agriculture infrastructure includes an irrigation system throughout the majority of the site. Existing agricultural operations on the project site currently use water from two on-site wells which draw from the underlying aquifer. Water for continued agricultural operations under the project would continue to be supplied by the existing wells. Refer to Section 4.13, *Water and Hydrology*, for a detailed discussion of water resources available to supply the existing and proposed agricultural uses on the project site as well as the proposed 13-lot agricultural cluster subdivision.

c. Soil and Farmland Characteristics

Soil Types and NRCS Classification

The United States Department of Agriculture (USDA) Natural Resource Conservation Service (NRCS) assesses the agricultural capacity of soils through its utilization of the Land Capability Classification System and the Storie Index. Capability Classes provide insight into the suitability of a soil for field crop uses based on factors that include texture, erosion, wetness, permeability, and fertility. The Storie Index is a soil rating based on soil properties that govern a soil's potential for cultivated agriculture in California. The Storie Index assesses the productivity of a soil from the following four characteristics: factor A, degree of soil profile development; factor B, texture of the surface layer;

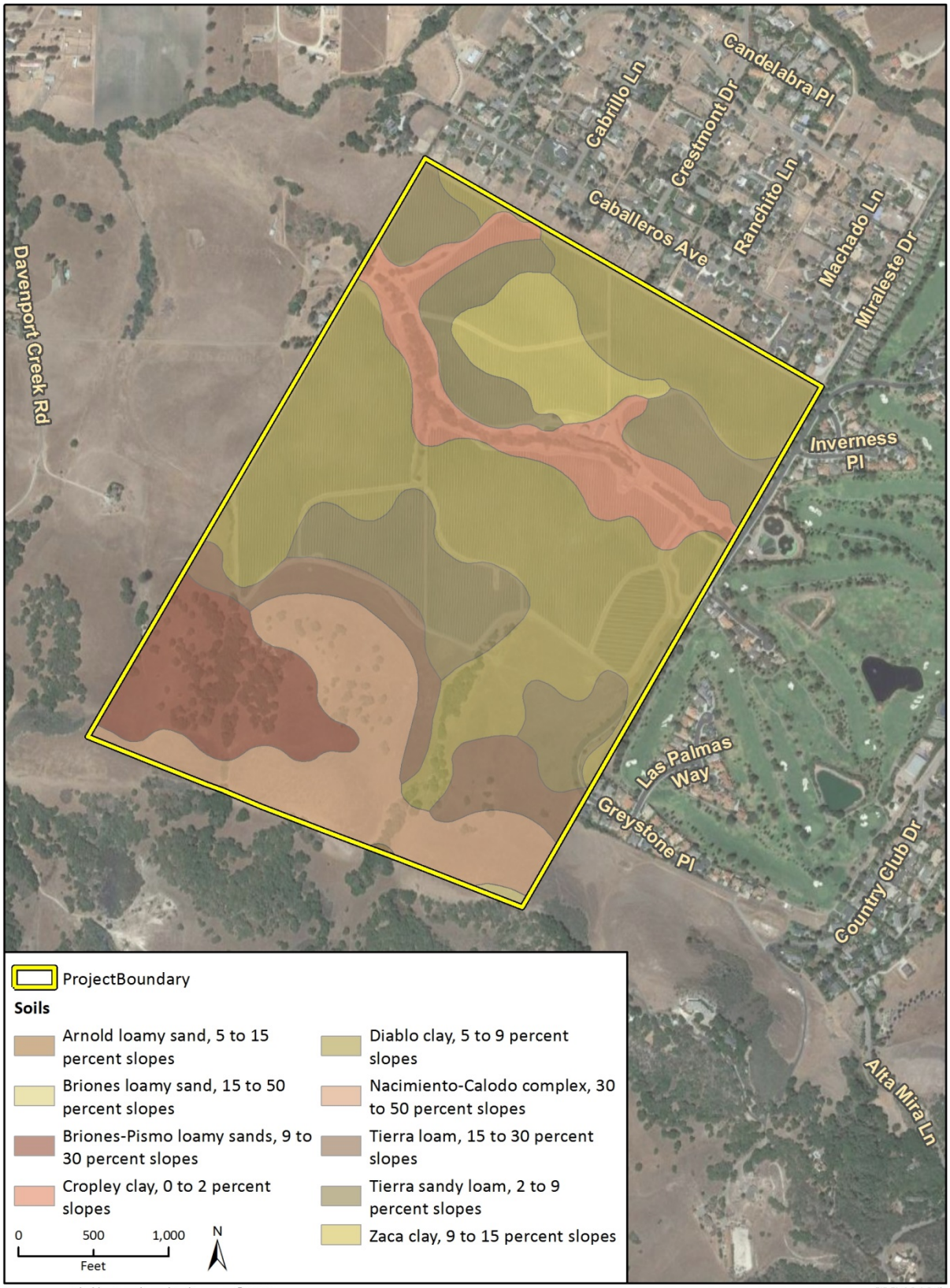
factor C, slope; and factor X, manageable features, including drainage, micro relief, fertility, acidity, erosion, and salt content. Under the California Revised Storie Index, these four factors translate into soil grades: Grade 1 (excellent), Grade 2 (good), Grade 3 (fair) and Grade 4 (poor). In addition, the NRCS farmland classification identifies the location and extent of the soils that are best suited to food, feed, fiber, forage, and oilseed crops and identifies map units as "Prime Farmland, if irrigated", Farmland of Statewide Importance" and "Not Prime Farmland". Figure 11 shows the soils types within the project site while Figure 12 shows the mapped NRCS classifications based on soil types identified within the project site.

Under the NRCS classification, the areas envisioned for the majority of the land conversion associated with new development on the southern portion of the project site are comprised of Class II, III, and VI irrigated soils, which include prime farmland if irrigated, farmland of statewide importance, and not prime farmland, as classified by NRCS. The poorest soils on the project site are those in areas of steep terrain which are also areas less conducive to urbanized development.

Table 8 Soil Composition of the Project Site

Map Unit	Name	Class	CA Revised Storie Index	County Status	NRCS Status
102 (0.2 ac)	Arnold loamy sand	3	Grade 3 – Fair	Farmland of Statewide Importance	Farmland of Statewide Importance
129 (110 ac)	Diablo clay 5-9% slopes	2	Grade 3 – Fair	Prime Farmland	Prime Farmland, if irrigated
127 (27.2 ac)	Cropley clay 0-2% slopes	2	Grade 3 – Fair	Prime Farmland	Prime Farmland, if irrigated
109 (27.1 ac)	Briones-Pismo loamy sands 9-30% slopes	6/7	Grade 4 – Poor	No Status	Not Prime Farmland
216 (52.4 ac)	Tierra sandy loam 2-9% slopes	3	Grade 2 – Good	Farmland of Statewide Importance	Farmland of Statewide importance
218 (19.6 ac)	Tierra loam 15-30% slopes	6	Grade 2 – Good	No Status	Not Prime Farmland
181 (42.1 ac)	Nacimiento-Calodo complex 30-50% slopes	6	Grade 4 – Poor	No Status	Not Prime Farmland
224 16.3 ac)	Zaca clay 9-15% slopes	3	Grade 4 – Poor	Farmland of Statewide Importance	Farmland of Statewide Importance

Figure 11 Soil Types on the Project Site



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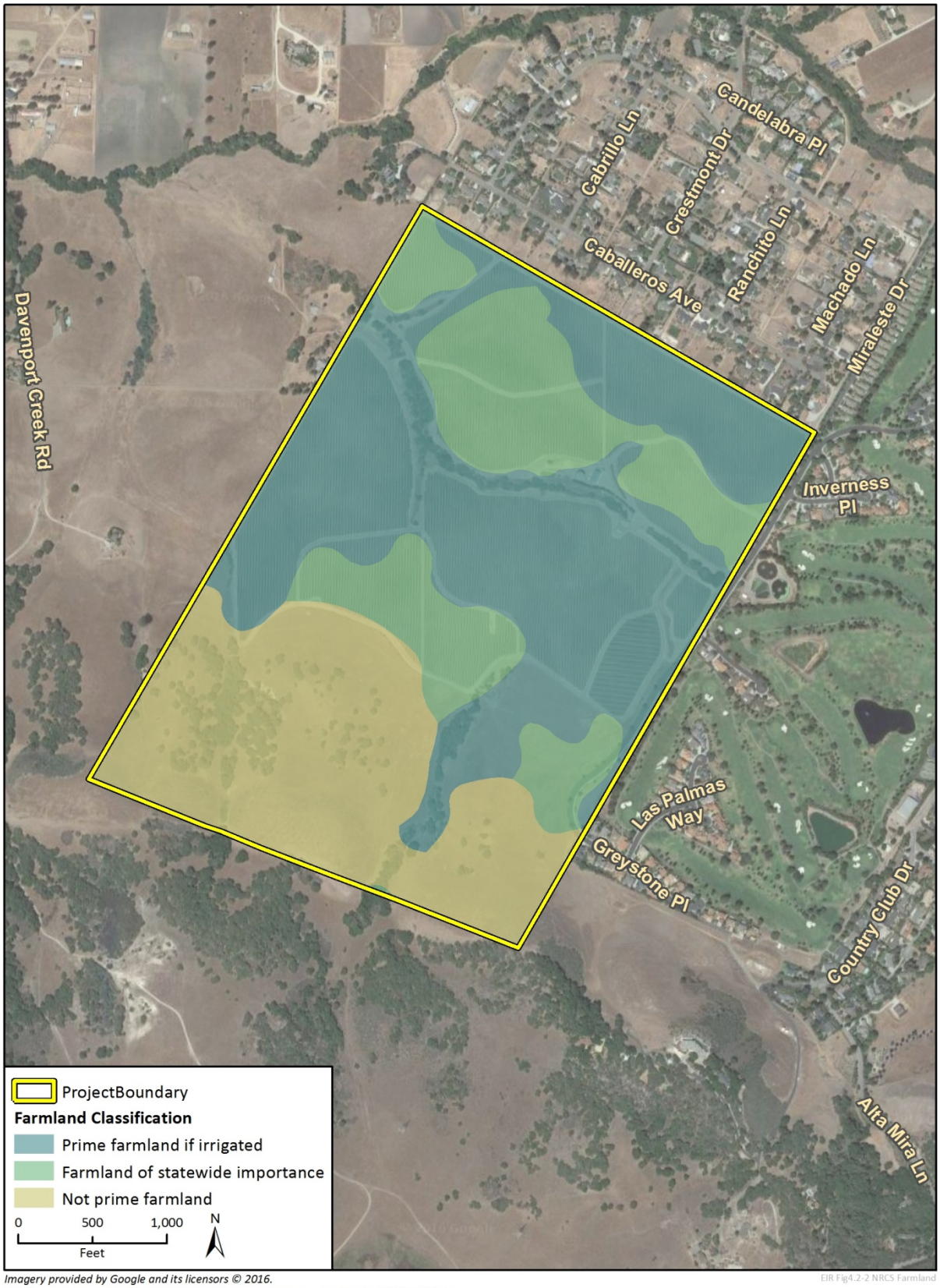
Additional data provided by USDA Natural Resources Conservation Service SSURGO, 2014.

Figure 12 NRCS Farmland Classifications Based on Soil Types on the Project Site



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Additional data provided by USDA Natural Resources Conservation Service SSURGO, 2014.

FMMP Designation

In addition to the NRCS system, the California Department of Conservation (DOC) Farmland Mapping and Monitoring Program (FMMP) compiles Important Farmland maps for each county within the State. Maps and statistics are produced biannually using a process that integrates aerial photo interpretation, field mapping, a computerized mapping system, and public review. The FMMP Important Farmlands differ from the NRCS farmland classification because the NRCS farmland classification is based solely on soil quality, while the FMMP Important Farmland designations are based on both soil quality and current land use. The various FMMP categories are defined as follows:

- **Prime Farmland:** Farmland with the best combination of physical and chemical features able to sustain long-term agricultural production. The land has the soil quality, growing season, and moisture supply needed to produce sustained high yields. Land must have been used for irrigated agricultural production at some time during the four years prior to the mapping date.
- **Farmland of Statewide Importance:** Farmland similar to Prime Farmland but with minor shortcomings, such as greater slopes or less ability to store soil moisture. Land must have been used for irrigated agricultural production at some time during the four years prior to the mapping date.
- **Unique Farmland:** Farmland of lesser quality soils used for the production of the State's leading agricultural crops. This land is usually irrigated, but may include non-irrigated orchards or vineyards found in some climatic zones in California. Land must have been cropped at some time during the four years prior to the mapping date.
- **Farmland of Local Importance:** Land of importance to the local agricultural economy as determined by each county's board of supervisors and a local advisory committee.
- **Farmland of Local Potential:** Land designated farmland of "Local Potential" in the County is an area that has the potential for farming, which has Prime or Statewide (Important) farmland characteristics, but which is not cultivated.
- **Grazing Land:** Land on which the existing vegetation is suited to the grazing of livestock. This category was developed in cooperation with the California Cattlemen's Association, University of California Cooperative Extension, and other groups interested in the extent of grazing activities.
- **Urban and Built-up Land:** Land occupied by structures with a building density of at least one unit to 1.5 acres, or approximately six structures to a 10 acre parcel. This land is used for residential, industrial, commercial, construction, institutional, public administration, railroad and other transportation yards, cemeteries, airports, golf courses, sanitary landfills, sewage treatment, water control structures, and other developed purposes.
- **Other Land:** Land not included in any other mapping category. Common examples include low-density rural developments; brush, timber, wetland, and riparian areas not suitable for livestock grazing; confined livestock, poultry, or aquaculture facilities; strip mines; borrow pits; and water bodies smaller than 40 acres. Vacant and nonagricultural land surrounded on all sides by urban development and greater than 40 acres is mapped as Other Land.
- **Water:** Perennial water bodies with an extent of at least 40 acres.

According to the DOC, the Prime Farmland, Farmland of Statewide Importance, Unique Farmland, and Farmland of Local Importance FMMP categories are considered Important Farmland. Under the FMMP, approximately 38 percent of the project site is Grazing Land and Farmland of Local Potential.

The remainder of the land within the project site is Prime Farmland, Farmland of Statewide Importance, and Unique Farmland. Figure 13 shows the mapped FMMP designations based on soil types and land uses identified within the project site.

County Agricultural Soils and Lands Classification

Table SL-2 in the County's General Plan Conservation and Open Space Element (COSE; 2010) classifies agricultural soils within the County as Prime Farmland, Farmland of Statewide Importance, Other Productive Soils, and Highly Productive Rangeland Soils. Additionally, the County's General Plan Agricultural Element (2010), for inland areas of the County, defines "prime agricultural lands or soils" as any of the following:

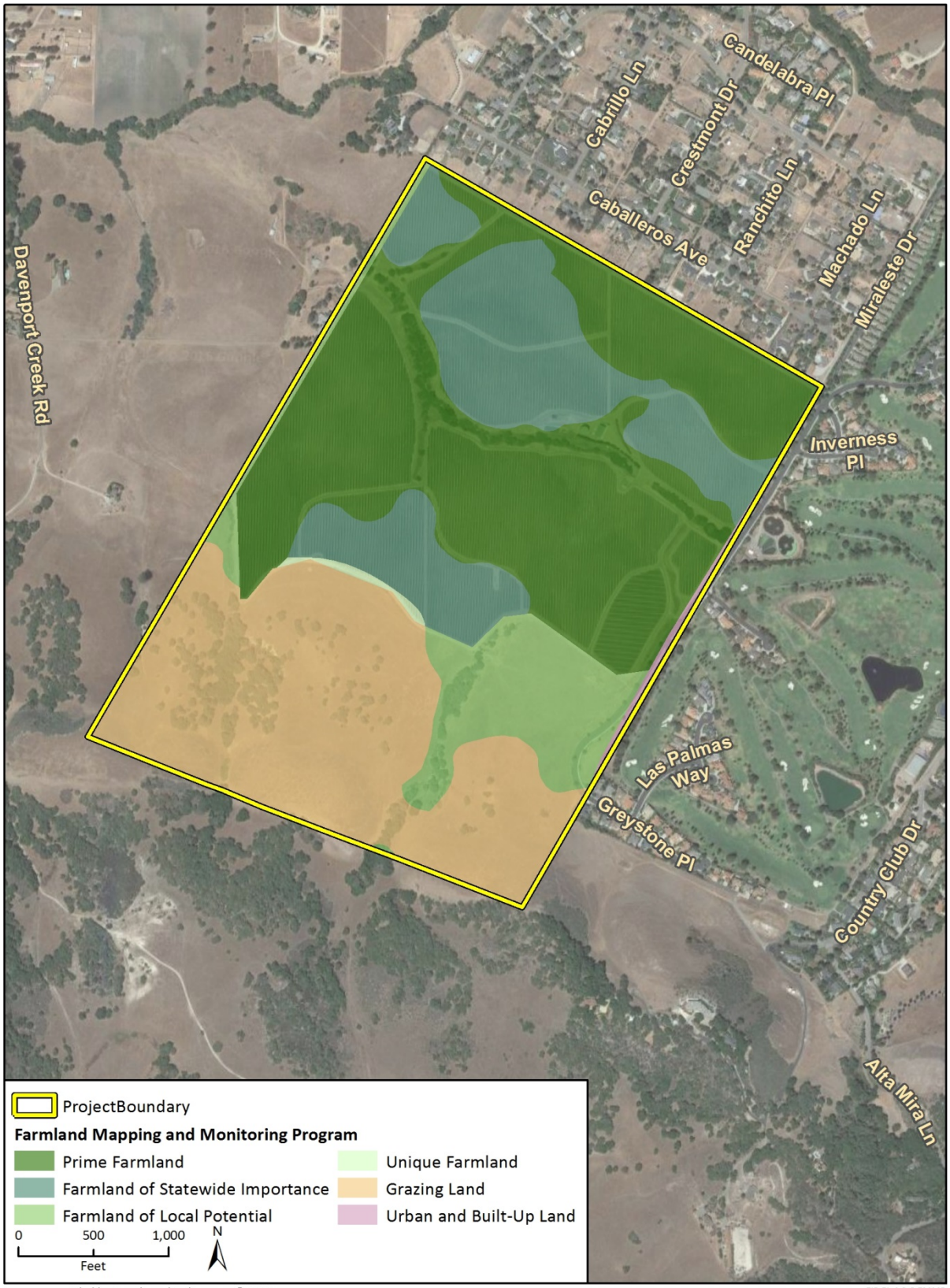
a. Land with a NRCS land capability rating of Class I or Class II (all land to qualify for these ratings must be irrigated); or
b. Other irrigated lands that have suitable soils, climate, and water supply which sustain irrigated crops valued according to one of the following criteria.
    1. Land planted in crops which have produced an annual gross value of $1,000 or more per acre for three of the previous five years.
    2. Land planted in orchards, vineyards, or other perennial crops that would produce an annual average gross value of $1,000 or more per acre if in full commercial bearing. Value is calculated by multiplying the average production per acre by the average value of the commodity from the previous five years as determined from the Annual Reports of the San Luis Obispo County Department of Agriculture and Measurement Standards.

Five of the eight soil mapping units on the property are considered to be Prime Farmland or Farmland of Statewide Importance (see Table 8 above). These five mapping units total approximately 206 acres, and include the existing 145 acres of vineyards, uncultivated areas along the streambeds, and portions of the north-facing hillsides on the property

d. Land Conservation Act (Williamson Act) Contracts

Preservation of agricultural, recreational, and open space lands through land conservation contracts between the County and property owners is a technique encouraged by the State of California for implementing the general plan. Land conservation contracts are executed through procedures enabled by the California Land Conservation Act of 1965, also known as the Williamson Act. A contract may be entered into for property with agricultural, recreational and open space uses in return for decreased property taxes. The County's *Rules of Procedure to Implement the California Land Conservation Act of 1965* (2015) require certain minimum parcel sizes and land use restrictions applicable to agricultural preserve lands under their respective contracts. The *Rules of Procedure* additionally outline agricultural and compatible uses for lands subject to land conservation contracts. Land Conservation Act contracts preserve agriculture and open space over a rolling term 10 to 20 year contract. The inclusion of a parcel in a Williamson Act contract is typically entirely voluntary and must have the consent of the property owner. However, for agricultural cluster projects in the County of San Luis Obispo, agriculture/open space parcels must qualify for a standalone Williamson Act preserve and contract and must be covered by a permanent agricultural open space easement, in accordance with the County's LUO requirements (Section 22.22.150.B.8).

Figure 13 FMMP Designations Based on Soil Types and Land Uses on the Project Site



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Additional data provided by California Department of Conservation, 2014.

e. Agricultural Lands Clustering Ordinance

As a proposed agricultural cluster subdivision, the project is subject to the County's Agricultural Lands Clustering Ordinance (Section 22.22.150 of the Land Use Ordinance and 2001 County land use standards which were in place when the project was accepted for processing). The intent of the Ordinance is to preserve and enhance agricultural uses, while allowing clustered residential development on large parcels, subject to certain findings being made. The required findings are as follows:

1. The proposed project will result in the continuation, enhancement and long-term preservation of agricultural operations consisting of the production of food and fiber on the subject site and in the surrounding area.
2. The proposed project has been designed to:
    a. Locate proposed development to avoid and buffer all prime agricultural soils on the site, other agricultural production areas on the site, as well as agricultural operations on adjoining properties;
    b. Minimize to the maximum extent feasible the need for construction of new roads by clustering new development close to existing roads;
    c. Avoid placement of roads or structures on any environmentally sensitive habitat areas;
    d. Minimize impacts of non-agricultural structures and roads on public views from public roads and public recreation areas;
    e. Cluster proposed residential structures to the maximum extent feasible so as to not interfere with agricultural production and to also be consistent with the goal of maintaining the rural character of the area;
    f. Minimize risks to life and property due to geologic, flood and fire hazard and soil erosion.
3. The proposed project will not result in any significant adverse social impacts affecting on-site or off-site agricultural operations, including but not limited to trespass, vandalism, and complaints about agricultural practices.
4. The water resources and all necessary services are adequate to serve the proposed development, including residential uses as well as existing and proposed agricultural operations on the subject site and in the site vicinity.
5. The proposed clustered development and the conditions, covenants and restrictions governing the Homeowners Association and/or individual lots are adequate to ensure permanent maintenance of the lands remain in agricultural production and/or open space.

The impact analysis will discuss the proposed project's potential consistency with making the required findings under Section 22.22.150.

f. Regulatory Setting

County of San Luis Obispo General Plan Conservation and Open Space Element

The COSE is a tool to protect and preserve the abundant natural resources and open space features in the County. Conservation is the planned management, preservation, and wise utilization of natural resources and landscapes to ensure their availability in the future. The following COSE policies apply to this project:

Policy SL 3.1 **Conserve Important Agricultural Soils.** Conserve the Important Agricultural Soils mapped in Figure SL-1 [see Figure 11] and listed in Table SL-2 [see Table 8]. Proposed conversion of agricultural lands to non-agricultural uses shall be evaluated against the applicable policies in this COSE and in the Agriculture Element, including policies such as Policies AGP18 and AGP24.

Policy WR 1.7 **Agricultural Operations.** Groundwater management strategies will give priority to agricultural operations. Protect agricultural water supplies from competition by incompatible development through land use controls.

County of San Luis Obispo General Plan Agriculture Element

The County's Agriculture Element identifies Goals, Policies, and Implementation Measures and Programs: (1) to promote and protect the County's agricultural industry, (2) to provide for continuity of sound and healthy agriculture in the County, and (3) maintain and protect agricultural lands from inappropriate conversion to non-agricultural uses. The following Agriculture Element policies apply to this project:

AGP16: AGRICULTURAL LAND CONSERVATION PROGRAMS

a. Encourage and support efforts by non-profit and other conservation organizations to protect agricultural lands and maintain agricultural production.
b. Consider establishing a limited county program to acquire conservation easements or development rights from willing land owners. Such programs should encourage maximum flexibility for agricultural operations.

AGP17: AGRICULTURAL BUFFERS

a. Protect land designated Agriculture and other lands in production agriculture by using natural or man-made buffers where adjacent to nonagricultural uses in accordance with the agricultural buffer policies adopted by the Board of Supervisors (see Agriculture Element Appendix C: Agricultural Buffer Policies for definitions and buffer specifications and requirements).

AGP18: LOCATION OF IMPROVEMENTS

a. Locate new buildings, access roads, and structures so as to protect agricultural land.

AGP24: CONSERVATION OF AGRICULTURAL LAND

a. Discourage the conversion of agricultural lands to non-agricultural uses through the following actions:
    1. Work in cooperation with the incorporated cities, service districts, school districts, the County Department of Agriculture, the Agricultural Advisory Liaison Board, Farm Bureau, and affected community advisory groups to establish urban service and urban reserve lines and village reserve lines that will protect agricultural land and will stabilize agriculture at the urban fringe.
    2. Establish clear criteria in this plan and the Land Use Element for changing the designation of land from Agriculture to non-agricultural designations.
    3. Avoid land redesignation (rezoning) that would create new rural residential development outside the urban and village reserve lines.

4. Avoid locating new public facilities outside urban and village reserve lines unless they serve a rural function or there is no feasible alternative location within the urban and village reserve lines.

4.2.2 Impact Analysis

a. Methodology and Significance Thresholds

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

1. Convert prime agricultural land, per NRCS soil classification, to non-agricultural use;
2. Convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance to non-agricultural use;
3. Impair agricultural use of other property or result in conversion to other uses; and/or
4. Conflict with existing zoning for agricultural use, or Williamson Act program.

Impacts would also be significant in the project cannot make the required findings under the County's Agricultural Lands Clustering Ordinance.

b. Project Impacts

Threshold:	Would the project convert prime agricultural land, per NRCS soil classification, to non-agricultural use?

Impact AG-1 **ALTHOUGH THE PROJECT WOULD PERMANENTLY CONVERT PRIME AGRICULTURAL LAND TO NON-AGRICULTURAL USES, THE PROJECT WOULD PRESERVE 95 PERCENT OF THE GROSS SITE AREA IN AGRICULTURE AND/OR NATURAL OPEN SPACE IN PERPETUITY. THEREFORE, IMPACTS RELATED TO CONVERSION OF PRIME AGRICULTURAL LAND WOULD BE CLASS III, LESS THAN SIGNIFICANT.**

Per NRCS soils classification, the Cropley clay and Diablo clay soils on the project site are classified as Prime Farmland, if irrigated, due their ideal suitability for food, feed, fiber, forage, and oilseed crops. The project site is currently irrigated for existing vineyard operations. As such, the Cropley clay and Diablo clay soils onsite are considered Prime Farmland. Development of the proposed agricultural cluster subdivision as well as the proposed expansion of the on-site vineyards would occur on the southern portion of the project site. Proposed vineyard expansion areas A (0.67 acres) and B (1.42 acres) would primarily occur on Diablo clay soils, thus, increasing the agricultural productivity of those areas. In addition, all of lot 4 and a portion of lots 3, 5, 6, 8, 9, and 11 as well as internal roadways (approximately 3.2 acres total) would be developed on Diablo clay soils. As such, the proposed agricultural subdivision would convert this area (3.2 acres) of NRCS-classified Prime Farmland to residential and roadway uses. However, the project as proposed would avoid development in areas of existing agricultural production, would expand the productivity of on-site prime agricultural land by expanding the on-site vineyards, and would preserve 95 percent of the gross site area in agriculture and/or natural open space in perpetuity, consistent with Section 22.22.152 of the County's Land Use Ordinance. Therefore, despite the conversion of approximately 3.2 acres of prime agricultural land to residential and roadway uses for the project, the overall impacts with respect to the conversion of prime agricultural land, per NRCS soil classification, is considered to be less than significant.

Threshold:	Would the project convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance to non-agricultural use?

Impact AG-2 **ALTHOUGH, THE PROJECT WOULD PERMANENTLY CONVERT PRIME FARMLAND AND FARMLAND OF STATEWIDE IMPORTANCE, PER THE COUNTY'S SOIL CLASSIFICATION, TO NON-AGRICULTURAL USES, THE PROJECT WOULD PRESERVE 95 PERCENT OF THE GROSS SITE AREA IN AGRICULTURE AND/OR NATURAL OPEN SPACE IN PERPETUITY. THEREFORE, IMPACTS WOULD BE CLASS III, LESS THAN SIGNIFICANT.**

Development of the proposed agricultural cluster subdivision would occur in areas categorized by the FMMP as Farmland of Local Potential and Grazing Land. None of the areas proposed for conversion to non-agricultural uses under the project are designated as Prime Farmland, Unique Farmland, or Farmland of Statewide Importance, per FMMP categorization. Approximately 7.6 acres of the area proposed for residential and roadway development under the project, are in areas classified as Prime Farmland and Farmland of Statewide Importance, which are considered important agricultural soils based on the County's COSE (Table SL-2). Thus, the project development would convert 7.6 acres of these soils listed as agriculturally important, to non-agricultural uses. However, as described under Impact AG-1, the project is proposed as a Major Agricultural Cluster project and would be consistent with the associated requirements in Section 22.22.152 of the County's Land Use Ordinance. Therefore, despite the conversion important agricultural soils, per the County's soil classification, to non-agricultural uses, the overall impact of the project to agricultural land and productivity would be less than significant.

Threshold:	Would the project impair agricultural use of other property or result in conversion to other uses?

Impact AG-3 **PROJECT COMPLIANCE WITH STANDARD SLOAPCD DUST CONTROL MEASURES AND COUNTY BUFFER POLICIES AS WELL AS LIMITATIONS ON ACCESS TO THE PROJECT SITE WOULD REDUCE AND/OR AVOID POTENTIAL IMPACTS ASSOCIATED WITH CONVERSION OF AGRICULTURAL USES TO NON-AGRICULTURAL USE. THIS IMPACT WOULD BE CLASS III, LESS THAN SIGNIFICANT.**

Approximately 145 acres of the 299-acre site are currently used for irrigated vineyard production. The project site is generally bounded by residential uses to the north and east, and agricultural uses to the west and south. As development occurs on the project site, conflicts could occur between continuing on-site agricultural operations and existing and future adjacent non-agricultural uses. Typical land use conflicts between active agricultural operations and other land uses are described below.

Short-Term Conflicts with Agricultural Uses

Construction associated with residential development on each of the 13 proposed lots would require extensive earthwork, which would result in fugitive dust that could impact on-site and off-site crops and other agricultural activities. Implementation of standard dust control measures required by the San Luis Obispo Air Pollution Control District (SLOAPCD), such as watering dirt to dampen and prevent or alleviate dust nuisance and covering stockpiles to prevent dust leaving the site, during each phase would ensure adjacent agricultural operations are not impacted by ongoing construction. Section 4.3, *Air Quality*, describes standard dust control measures required by SLOAPCD that would be applicable during project construction and would incrementally reduce potential impacts to the productivity of on-site and neighboring agricultural uses. Compliance with standard SLOAPCD dust control measures and County policies to provide buffers between urban and

agricultural uses on the project site would ensure that impacts from short-term conflicts with agricultural uses during project construction would remain less than significant.

Long-Term Conflicts with Agricultural Uses

Urban development adjacent to agricultural land can create conflicts with agricultural operations in adjacent areas. The increase in the number of residents in the area would increase access near existing agricultural areas, increasing the potential for conflicts, such as vandalism to farm equipment or fencing, and theft of crops at on-site agricultural lands. These effects can result in direct economic impacts to agricultural operations, potentially impacting the overall economic viability of continued agricultural operations. However, the proposed primary access to the project site would be via Greystone Place through the San Luis Obispo Country Club Estates. This would require granted access through the Country Club entrance, preventing access to the site by unapproved visitors. This limitation to access would decrease the potential for random visitors to the site thereby decreasing the potential for vandalism and theft of on-site agricultural uses.

Long-Term Conflicts with Residential and Commercial Uses

Development of the project would add an estimated 33 residents to the County (13 new single family dwelling units x 2.52 persons per unit [DOF 2017]) near lands under agricultural cultivation. Residents living adjacent to agricultural operations commonly cite odor nuisance impacts, noise from farm equipment, dust, and pesticide spraying as typical sources of conflict. Agriculture Element Policy AGP17: Agricultural Buffers requires that natural or man-made buffers be placed between urban development and agricultural operations in accordance with the Agriculture Element Appendix C: Agricultural Buffer Policies adopted by the County Board of Supervisors. As stated in Appendix C, when identified as a mitigation measure the buffer is:

> "…placed on the developer's property and will be recorded as a distance from the property line to the proposed occupied structure. However, the total buffer distance calculation and recommendation is measured from proposed occupied structure to the edge of the agricultural operation. The buffer will allow for such land uses as landscaping, barns, storage buildings, orchards, pastures, etc., while protecting the agricultural use and the public's health and safety." (San Luis Obispo County May 2010:page C-5)

To be entirely consistent with the County's agricultural buffer policies, a minimum 200 foot buffer, placed under deed restriction, would be required for the project between the residential lots and active vineyards. The proposed site plan for the project (refer to Figure 5) provides a buffer of approximately 300 feet within the agricultural open space lot between the edge of proposed residential lots and the nearest proposed vineyards. Building envelopes would be set back 30 feet from the lot boundaries. As such, building envelopes would be located approximately 330 feet from the nearest agricultural activities (vineyards).This would result in the majority of the buffer placed on the preserved agricultural areas on the project site, rather than fully within the proposed residential development lots, These areas within the agricultural open space easement could be used for stormwater features, farm access roads, open areas, or related agricultural uses. These areas are deemed most appropriate for the proposed buffers because they are not planned for or generally suitable for viable agricultural production, and this design allows the size of the residential lots to be minimized. These buffers would serve to reduce and/ or avoid noise, dust, light impacts, odors, chemical use, access by people and pets, pilferage, and pesticide drift to new residential land uses on the project site. Compliance with requirements of Agriculture Element Policy AGP17 and the buffer distance specifications in the County's Agricultural Buffer Policies in Appendix C of the

Agricultural Element would ensure that land use conflicts between agriculture and adjacent residential land would be minimized.

Due to required project compliance with standard SLOAPCD dust control measures and County policies to provide buffers between urban and agricultural uses as well as limitations on access to the project site, impacts associated with conversion of agricultural uses to non-agricultural use would be less than significant.

Threshold:	Would the project conflict with existing zoning for agricultural use, or Williamson Act program?

Impact AG-4 RESIDENTIAL DEVELOPMENT ON THE PROJECT SITE IS PROPOSED AS A MAJOR AGRICULTURAL CLUSTER PROJECT AND THE PROJECT WOULD BE REQUIRED TO IMPLEMENT A PERMANENT OPEN SPACE EASEMENT AS WELL AS A WILLIAMSON ACT CONTRACT FOR THE PROPOSED AGRICULTURE/OPEN SPACE PARCEL. THIS IMPACT WOULD BE CLASS III, LESS THAN SIGNIFICANT.

No Williamson Act contracts exist on the project site. The project is a proposed Major Agricultural Cluster project and would be required to comply with Section 22.22.152 of the County's Land Use Ordinance, requiring that 95 percent of the site be preserved as open space or agricultural land. In order to meet this requirement, all land on the project site outside of the proposed development area would be placed in a permanent open space easement as well as a Williamson Act Contract to be preserved as open space or agricultural land, pursuant to Section 22.22.150.B.8 of the Land Use Ordinance. Therefore, the project would not conflict with existing zoning for agricultural use or a Williamson Act contract. This impact would be less than significant.

c. Cumulative Impacts

Cumulative development throughout the greater San Luis Obispo County area would gradually convert agricultural land to non-agricultural use. The proposed agricultural subdivision would convert approximately 3.2 acres of NRCS-classified Prime Farmland or approximately 7.6 acres of important agricultural soils based on the County's COSE (Table SL-2) to non-agricultural uses. However, the project would avoid development in areas of existing agricultural production, would expand the productivity of on-site prime agricultural land by expanding the on-site vineyards, and would preserve 95 percent of the gross site area in agriculture and/or natural open space in perpetuity, consistent with Section 22.22.152 of the County's Land Use Ordinance. The project would also comply with standard SLOAPCD dust control measures and County policies to provide buffers between urban and agricultural uses as well as limitations on access to the project site in order to avoid future conversion of agricultural uses to non-agricultural use. Therefore, the project would not result in a considerable contribution to cumulative impacts to County agricultural lands, soils, and uses. In summary, cumulative impacts of the project on agricultural resources would be less than significant.

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4.3 Air Quality

4.3.1 Setting

a. Climate and Topography

The project site is within the South Central Coast Air Basin (SCCAB), which includes all of San Luis Obispo, Santa Barbara, and Ventura Counties. The 2001 Clean Air Plan (CAP) for San Luis Obispo County describes the air quality setting for the County in detail, including the local climate and meteorology, current and projected air quality, and the regulatory framework for the management of air quality. The climate of the SCCAB is strongly influenced by its proximity to the Pacific Ocean and the location of the semi-permanent high-pressure cell in the northeastern Pacific. The Mediterranean climate of the region produces moderate average temperatures, although extreme temperatures can be reached in the winter and summer. The warmest month of the year is September with an average maximum temperature of 69.8 degrees Fahrenheit (°F), while the coldest month of the year is January with an average minimum temperature of 46.7 °F (Western Regional Climate Center [WRCC] 2016). Rainfall is concentrated in the winter months. Local climate conditions are shown in Table 9.

Table 9 San Luis Obispo Area Climate Conditions

Average annual rainfall	22.4 inches
Average maximum temperature (Annual)	69.8 °F
Average minimum temperature (Annual)	46.7 °F
Warmest Month	September
Coolest Month	January
Annual mean temperature	58.3 °F

Source: WRCC 2016 and National Oceanic and Atmospheric Administration (NOAA) 2016.
Note: Averages are based on the period of record, February 2, 1893 to June 10, 2016.

The region is subject to seasonal Santa Ana winds. Santa Ana winds are strong northerly to northeasterly winds that originate from high-pressure areas centered over the desert of the Great Basin. These winds are usually warm, dry, northerly winds which blow offshore at 15 to 20 miles per hour (mph), but can reach speeds in excess of 60 mph. Santa Ana winds are particularly strong in the mountain passes and at the mouths of canyons. The prevailing winds of the San Luis Obispo area are northwesterly (i.e., winds generally blow northwest to southeast; NOAA 2016). However, seasonal and local topographic conditions may alter the wind directionality experienced in San Luis Obispo County.

Two types of temperature inversions (warmer air on top of cooler air) are created in the area: subsidence and radiational. The subsidence inversion is a regional effect created by the Pacific high in which air is heated as it is compressed when it flows from the high-pressure area to the low-pressure areas inland. This type of inversion generally forms at about 1,000 to 2,000 feet and can occur throughout the year, but it is most evident during the summer months. Radiational, or

surface, inversions are formed by the more rapid cooling of air near the ground at night, especially during winter. This type of inversion is typically lower and is generally accompanied by stable air. Both types of inversions limit the dispersal of air pollutants within the regional airshed, with the more stable the air (low wind speeds, uniform temperatures), the lower the amount of pollutant dispersion.

b. Air Pollutants of Primary Concern

The State and Federal Clean Air Acts mandate the control and reduction of certain air pollutants. Under these Acts, the United States Environmental Protection Agency (U.S. EPA) and the California Air Resources Board (CARB) have established ambient air quality standards for certain "criteria" pollutants. Ambient air pollutant concentrations are affected by the rates and distributions of corresponding air pollutant emissions, as well as by the climactic and topographic influences discussed above. The primary determinant of concentrations of non-reactive pollutants (such as carbon monoxide [CO] and fine particulate matter [$PM_{2.5}$ and PM_{10}]) is proximity to major sources. Ambient CO levels usually closely follow the spatial and temporal distributions of vehicular traffic.

Federal and state standards have been established for ozone (O_3), CO, nitrogen dioxide (NO_2), sulfur dioxide (SO_2), lead, and PM_{10} and $PM_{2.5}$. Standards have been set at levels intended to be protective of public health. California standards are more restrictive than federal standards for each of these pollutants except lead and the eight-hour average for CO. Table 10 illustrates the current Federal and State Ambient Air Quality Standards.

Table 10 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	0.070 ppm
Carbon Monoxide	1-Hour	35.0 ppm	20.0 ppm
	8-Hour	9.0 ppm	9.0 ppm
Nitrogen Dioxide	Annual	0.053 ppm	0.030 ppm
	1-Hour	0.100 ppm	0.18 ppm
Sulfur Dioxide	Annual	0.030 ppm	–
	24-Hour	0.14 ppm	0.04 ppm
	1-Hour	75 ppb	0.25 ppm
PM_{10}	Annual	–	20 µg/m3
	24-Hour	150 µg/m3	50 µg/m3
$PM_{2.5}$	Annual	12 µg/m3	12 µg/m3
	24-Hour	35 µg/m3	–
Lead	30-Day Average	–	1.5 µg/m3
	Rolling 3-Month Average	0.15 µg/m3	–

Source: CARB 2016
ppm = parts per million
$\mu g/m^3$ = micrograms per cubic meter

The SLOAPCD monitors criteria pollutant levels to assure that air quality standards are met, and if they are not met, develops strategies to meet the standards. Depending on whether or not the standards are met or exceeded, the air basin is classified as being in "attainment" or as "non-attainment." San Luis Obispo County is designated as a non-attainment area for the State 1-hour standard and National 1-hour and 8-hour standards for O_3 as well as the State 24-hour and annual standards for PM_{10} (SLOACPD 2015 Annual Air Quality Report, 2016).

CARB maintains over 60 air quality monitoring stations throughout California, including ten stations in San Luis Obispo County. Every year SLOAPCD submits a local ambient air monitoring network plan (ANP) to the U.S. EPA. As described in SLOAPCD's 2017 ANP, most ambient air quality monitoring stations operated by air quality agencies are classified as State and Local Air Monitoring Stations (SLAMS). SLAMS are long-term monitoring stations and are generally permanent sites. Of the ten SLAMS in the County, eight are operated by SLOAPCD and two are operated by CARB. The nearest monitoring station to the project site is the San Luis Obispo - Higuera Street Station. This station is located, approximately five miles northwest of the project site at 3220 South Higuera Street and is operated by ARB. The San Luis Obispo - Higuera Street Station collects data on both O_3 and PM_{10} concentrations, for which the County is in non-attainment. The data collected at this station is considered to be generally representative of the baseline air quality experienced at the project site and is summarized in Table 11.

Table 11 Ambient Air Quality Data at the San Luis Obispo-Higuera Street Station

Pollutant	2014	2015	2016
Ozone, ppm –Hourly Maximum	0.080	0.066	0.069
Number of days of State exceedances (>0.09 ppm)	0	0	0
Number of days of Federal exceedances (>0.12 ppm)	0	0	0
Ozone, ppm – Eight Hour (State)	0.074	0.062	0.062
Number of days of State exceedances (>0.070 ppm)	1	0	0
Number of days of Federal exceedances (>0.075 ppm)	0	0	0
Particulate Matter <10 microns, μg/m3 Worst 24 Hours	43.2	43.1	43.2
Number of samples of State exceedances (>50 μg/m3)	0	0	0
Number of samples of Federal exceedances (>150 μg/m3)	0	0	0

Source: CARB Top 4 Summary, 2017.

The primary pollutants of concern in San Luis Obispo are O_3 and PM_{10}. Table 11 provides the number of days of State or Federal exceedance in a given year, that the standard would have been exceeded had sampling occurred every day of the year. One exceedance of the State 8-hour standard for O_3 was recorded in 2014. No other exceedances of the State or Federal standards for O_3 and PM_{10} have been recorded at the San Luis Obispo – Higuera Street Station since 2014.

The major local sources for PM_{10} are agricultural operations, vehicle dust, grading, and dust produced by high winds. Ozone is a secondary pollutant that is not produced directly by a source, but rather is formed by a reaction between nitrogen oxides (NO_X) and reactive organic gases (ROG) in the presence of sunlight. Reductions in ozone concentrations are dependent on reducing the amount of these precursors. In San Luis Obispo County, the major sources of ROG are motor

vehicles, organic solvents, the petroleum industry, and pesticides; and the major sources of NO_X are motor vehicles, public utility power generation, and fuel combustion by various industrial sources (SLOAPCD 2001).

c. Regulatory Setting

Air quality is regulated by the U.S. EPA, ARB, and SLOAPCD. Each of these agencies develops rules, regulations, policies, and/or goals to comply with applicable legislation. Although U.S. EPA regulations may not be superseded, state and local regulations may be more stringent.

The Federal Clean Air Act (CAA) required U.S. EPA to establish national ambient air quality standards (NAAQS) (Table 10). The CAA also required each state to prepare an air quality control plan referred to as a State Implementation Plan (SIP). The Federal CAA Amendments of 1990 added requirements for states with nonattainment areas to revise their SIPs to incorporate additional control measures to reduce air pollution. The SIP is modified periodically to reflect the latest emissions inventories, planning documents, and rules and regulations of the air basins as reported by their jurisdictional agencies. The EPA is responsible for reviewing all SIPs to determine whether they conform to the mandates of the CAA and its amendments and whether implementation will achieve air quality goals. If the EPA determines a SIP to be inadequate, a federal implementation plan that imposes additional control measures may be prepared for the nonattainment area. If an approvable SIP is not submitted or implemented within the mandated time frame, sanctions may be applied to transportation funding and stationary air pollution sources in the air basin.

The CARB is responsible for preparing and enforcing the Federally-required SIP to achieve and maintain NAAQS, as well as the California Ambient Air Quality Standards (CAAQS), which were developed as part of the California Clean Air Act (1988) (Table 10). The State standards for criteria pollutants are equivalent to or more stringent than the national standards, and include other pollutants for which there are no national standards. The CARB is also responsible for assigning air basin attainment and nonattainment designations in California. Air basins are designated as being in attainment if the levels of a criteria air pollutant meet the CAAQS for the pollutant and are designated as being in nonattainment if the concentration of a criteria air pollutant exceeds the CAAQS.

The CARB is the oversight agency responsible for regulating statewide air quality, but implementation and administration of the CAAQS is delegated to several regional air pollution control districts and air quality management districts. These districts have been created for specific air basins and have principal responsibility for: developing plans to comply with the NAAQS and CAAQS; developing control measures for non-vehicular sources of air pollution necessary to achieve and maintain NAAQS and CAAQS; implementing permit programs established for the construction, modification, and operation of air pollution sources; enforcing air pollution statutes and regulations governing non-vehicular sources; and developing employer-based trip reduction programs. With regards to toxic air contaminants (TACs), the Tanner Air Toxics Act (Assembly Bill [AB] 1807, Chapter 1047, Statutes of 1983) sets forth a formal procedure for CARB to designate substances and develop control measures. The Air Toxics Hot Spots Information and Assessment Act of 1987 (AB 2588, Chapter 1252, Statutes of 1987) requires stationary sources to report the types and quantities of certain substances routinely released into the air.

The SLOAPCD, the lead air quality regulatory agency for San Luis Obispo County, maintains air quality comprehensive programs for planning, regulation, enforcement, technical innovation, and promotion of the understanding of air quality issues. The clean-air strategy of SLOAPCD involves the preparation of plans and programs for the attainment of CAAQS and NAAQS, adoption and

enforcement of rules and regulations, and issuance of permits for stationary sources. In compliance with state regulatory requirements, SLOAPCD prepared the 2001 CAP, which serves as an overall plan for air quality improvement for the SCCAB. The 2001 CAP addresses the attainment and maintenance of state and federal ambient air quality standards within the SCCAB as well as contains a comprehensive set of control measures and a regulatory framework designed to reduce criteria air pollutants and precursors from both stationary and mobile sources. The SLOAPCD also inspects stationary sources to ensure they abide by permit requirements, responds to citizen complaints, monitors ambient air quality and meteorological conditions, and implements other programs and regulations required by the Federal and State Clean Air Acts.

In 2009, SLOAPCD adopted guidelines for assessment and mitigation of air quality impacts under the California Environmental Quality Act (CEQA). The *CEQA Air Quality Handbook*, which has since been updated (SLOAPCD 2012), is an advisory document that provides lead agencies, consultants, and project applicants with uniform procedures for addressing air quality issues in environmental documents.

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. Standards 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.

Sensitive receptors in the vicinity of the project site include residences directly adjacent to the northeast, as well as the San Luis Obispo Country Club. The project site is located approximately half a mile from the local elementary school. School location is identified in Section 4.10, *Public Services*.

e. Naturally Occurring Asbestos

Naturally Occurring Asbestos (NOA) can be released from serpentine and ultramafic rocks when the rock is broken or crushed. At the point of release, the asbestos fibers may become airborne, causing air quality and human health hazards. The U.S. EPA and California Air Resources Board (CARB) identify asbestos as a toxic air contaminant. The CARB has established an Air Toxics Control Measure (ACTM) for NOA, which is found in the California Code of Regulations (17 CCR 93105). This measure requires specified control measures for grading or land disturbance that meets certain conditions, and allows for the local APCD to exempt specific projects or areas from regulation upon review of a geological evaluation. As originally mapped by the SLOAPCD, the location of the project site within the County of San Luis Obispo does not lie within an area of the County where such a geologic analyses was required in order to qualify for an exemption from the NOA ACTM (Refer to Figure 4-1 of the *CEQA Air Quality Handbook*).

f. Odors

The SLOAPCD *CEQA Air Quality Handbook* identifies multiple odor-causing sources including, but not limited to, wastewater treatment plants, landfills, composting facilities, petroleum refineries, and chemical manufacturing. There are no major sources of odor located within a significant distance from the project site.

4.3.2 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).

Significance Thresholds

The following criteria are based on the County's Initial Study and Appendix G of the *State CEQA Guidelines*. To determine whether a proposed project would have a significant impact to air quality, Appendix G of the CEQA Guidelines questions whether a project would:

1. Conflict with or obstruct implementation of the applicable air quality plan;
2. Violate any air quality standard or contribute substantially to an existing or projected air quality violation;
3. 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);
4. Expose sensitive receptors to substantial pollutant concentrations; or
5. Create objectionable odors affecting a substantial number of people.

The project Initial Study determined that the project would not result in objectionable odors that could affect a substantial number of people. Therefore, impacts associated with project-generation of objectionable odors are not discussed further in this section. Refer to the Initial Study in Appendix A for a discussion of this issue.

The SLOAPCD has developed specific numeric thresholds that apply to projects within the SCCAB and has established the following significance thresholds for construction activities within the SCCAB:

ROG and NOX Emissions

- **Daily.** For construction projects expected to be completed in less than one quarter (90 days), exceedance of the 137 pounds per day threshold requires Standard Mitigation Measures;
- **Quarterly – Tier 1.** For construction projects lasting more than one quarter, exceedance of the 2.5 tons per quarter threshold requires Standard Mitigation Measures and Best Available Control Technology (BACT) for construction equipment. If implementation of the Standard Mitigation and BACT measures cannot bring the project below the threshold, off-site mitigation may be necessary; and,
- **Quarterly – Tier 2.** For construction projects lasting more than one quarter, exceedance of the 6.3 tons per quarter threshold requires Standard Mitigation Measures, BACT, implementation of a Construction Activity Management Plan (CAMP), and off-site mitigation.

a) Diesel Particulate Matter (DPM) Emissions

- **Daily.** For construction projects expected to be completed in less than one quarter, exceedance of the 7 pounds per day threshold requires Standard Mitigation Measures;

- **Quarterly – Tier 1.** For construction projects lasting more than one quarter, exceedance of the 0.13 tons per quarter threshold requires Standard Mitigation Measures, BACT for construction equipment; and,
- **Quarterly – Tier 2.** For construction projects lasting more than one quarter, exceedance of the 0.32 ton per quarter threshold requires Standard Mitigation Measures, BACT, implementation of a CAMP, and off-site mitigation.

b) Fugitive Particulate Matter (PM10), Dust Emissions

- **Quarterly.** Exceedance of the 2.5 tons per quarter threshold requires Fugitive PM_{10} Mitigation Measures and may require the implementation of a CAMP.

The applicability and requirements of the SLOAPCD Standard Mitigation Measures and Fugitive Dust Mitigation Measures are contained in the SLOACPD CEQA Air Quality Handbook (2012).

SLOAPCD has also established the following significance thresholds for project operations in the South Central Coast Air Basin:

- 25 pounds per day of ROG + NO_X
- 550 pounds per day of CO
- 25 pounds per day of PM_{10} (total)
- 1.25 pounds per day of PM_{10} exhaust

Methodology

This air quality analysis conforms to the methodologies recommended in the SLOAPCD's *CEQA Air Quality Handbook* (2012). The handbook includes thresholds for emissions associated with both construction and operation of proposed projects.

The construction activities associated with development would generate diesel emissions and dust. Construction equipment that would generate criteria air pollutants includes excavators, graders, dump trucks, and loaders. Some of this equipment would be used during grading activities as well as when structures are constructed. It is assumed that all construction equipment used would be diesel-powered. The regional construction emissions associated with development of the proposed project were calculated using the California Emissions Estimator Model (CalEEMod) version 2013.2.2 software (developed by SCAQMD) by estimating the types and number of pieces of equipment that would be used on-site during the construction phase. These construction emissions are analyzed using the regional thresholds established by the SLOAPCD and published in the *CEQA Air Quality Handbook*.

Operational emissions associated with on-site development were estimated using CalEEMod. Operational emissions include mobile source emissions, energy (natural gas) emissions, and area source emissions. The project would involve additional electricity use. However, criteria pollutant emissions associated with electricity consumption are attributed to the source of electricity generation rather than the land use at which the electricity is consumed, since electricity generation may occur at locations far from the consuming land use, and the impacts associated with criteria pollutant emissions are localized. The project's total electricity consumption is shown in the Appendix C for informational purposes, and is discussed in Section 4.4, *Greenhouse Gas Emissions*. Mobile source emissions are generated by the increase in motor vehicle trips to and from the project site associated with operation of on-site development. The emissions modeling accounts for the project's proximity the increasing density and number of jobs in the area. Area source emissions

are generated by landscape maintenance equipment, consumer products and architectural coating. To determine whether a regional air quality impact would occur, the increase in emissions would be compared with the SLOAPCD's recommended regional thresholds for operational emissions.

Additionally, the determination of the whether the project would conflict with or obstruct implementation of the SLOAPCD 2001 CAP is based on the project's consistency the CAP. If the project is consistent with the land use and transportation control measures and strategies outlined in the CAP, then it is consistent with and would not conflict with or obstruct implementation of the CAP. The project would result in a potentially significant impact if a determination of inconsistency with the CAP is made.

b. Project Impacts

Threshold:	Would the project conflict with or obstruct implementation of the applicable air quality plan?

Impact AIR-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.

As described in Section 4.3.2, *Methodology and Thresholds*, significant impacts related to consistency with the 2001 CAP are identified by determining whether the project would exceed the population projections used in the CAP for the same area, whether the vehicle trips and vehicle miles traveled generated by the project would exceed the rate of population growth for the same area, and whether all applicable land use management strategies and transportation control measures from the CAP have been included in the project to the maximum extent feasible.

Population Growth Consistency

Development of the project would add an estimated 33 residents to the County (13 new single family dwelling units x 2.52 people/unit [DOF 2017]). When added to the existing population within the County of approximately 280,101 (DOF 2016), buildout of the Specific Plan Area would increase the County's total population to an estimated 280,134 residents, an increase of less than 0.1 percent. The 2001 CAP's population estimate for the County was 305,854 by 2015, which represents growth of 34 percent over the 20-year period from 1995 to 2015. Because the project would not cause the County's population to exceed the 2001 CAP's 2015 population estimate for the County of 305,854, the project would not result in an exceedance of the population projections contained in the 2001 CAP.

Vehicle Trip Rate Increase and Miles Traveled

The Traffic and Circulation Study determined that the project would add a total of 10 vehicle trips in the AM peak hour and 13 vehicles in the PM peak hour to local roadways under existing and short-term conditions (Appendix H; also refer to Section 4.11, *Transportation and Circulation*). Based on the CalEEMod analysis (see Appendix C), the project would result in annual vehicle miles traveled (VMT) of 515,905, or a daily VMT of 1,413 (annual VMT divided by 365 days per year). The project's increase in total VMT is minimal in comparison with expected population growth in the County. As such, the project would not conflict with the VMT assumptions in the 2001 CAP.

Implementation of Land Use and Transportation Control Measures

The 2001 CAP includes 14 strategies intended to reduce the number of trips and VMT by encouraging "development of compact communities that provide a balance of housing and jobs, while fostering the use of alternatives to the automobile." These strategies are generally intended for development prioritized around urban and City centers in the County. The County's Agricultural Lands Clustering Ordinance (Section 22.22.150 of the County's Land Use Ordinance) specifications for Major Agricultural Project's states that "Properties in the unincorporated areas of the county that are located outside the coastal zone, that are partly or entirely within five miles of a urban or village reserve lines, and that comply with the locational criteria in Sections 22.22.152 A. and B. can apply for a major agricultural cluster." The project would result in development within five miles of the urban area of the City of San Luis Obispo consistent with the provisions of the Agricultural Lands Clustering Ordinance. As such, the project would be indirectly consistent with the land use and planning strategies and goals for the County and the 2001 CAP, despite being rural in nature.

For the reasons described above, the project would be consistent with and, thereby, not conflict with or obstruct implementation of the SLOAPCD 2001 Clean Air Plan. Therefore, this potential impact would be less than significant.

Threshold:	Would the project violate any air quality standard or contribute substantially to an existing or projected air quality violation?

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

Construction of the project would generate temporary air pollutant emissions. Ozone precursors, NO_X and ROG, as well as DPM (exhaust $PM_{2.5}$ and PM_{10}) would be emitted by the operation of construction equipment, while fugitive dust (PM_{10}) would be emitted by activities that disturb the soil, such as grading and excavation, roadway construction, and building construction. The project's maximum quarterly emissions are shown in Table 12.

Table 12 Estimated Construction Maximum Quarterly Air Pollutant Emissions

	Maximum Quarter Per Year (tons/quarter)[2]		
Construction Year	**ROG + NOX**	**DPM**	**Dust**
2018	1.3	0.1	0.1
2019	0.8	<0.1	<0.1
Maximum tons/quarter	1.3	0.1	0.1
SLOAPCD Quarterly Tier 1 Thresholds (tons/quarter)	2.5	0.13	2.5
Threshold Exceeded?	No	No	No
SLOAPCD Quarterly Tier 2 Thresholds (tons/quarter)	6.3	0.32	2.5
Threshold Exceeded?	No	No	No

Notes: All calculations were made using CalEEMod. See Appendix C for model results. DPM equal to combined exhaust PM_{10} and $PM_{2.5}$ and dust equal to fugitive PM_{10} from CalEEMod.

1 CalEEMod calculates quarterly emissions of ROG+NO_x, but does not generate quarterly emissions for DPM and dust; therefore, maximum annual construction emissions of DPM and dust were divided by the number of quarters undergoing construction in a year to estimate maximum quarterly emissions.

As shown in Table 12, the project's combined ROG and NO_X emissions, DPM emissions, and dust emissions would not exceed SLOAPCD Tier 1 or 2 thresholds.

Although the project's construction emissions would not exceed Tier 1 or 2 thresholds, SLOAPCD requires any project with grading areas greater than 4.0 acres or that are within 1,000 feet of any sensitive receptor to implement standard fugitive dust and diesel emissions control mitigation measures. Therefore, the following measures would be required during project construction activities.

Fugitive Dust Control Measures

Construction projects shall implement the following dust control measures so as to reduce PM_{10} emissions in accordance with SLOAPCD requirements.

- Reduce the amount of the disturbed area where possible;
- Water trucks or sprinkler systems shall be used during construction in sufficient quantities to prevent airborne dust from leaving the site. Increased watering frequency shall be required whenever wind speeds exceed 15 mph. Reclaimed (non-potable) water shall be used whenever possible;
- All dirt stock pile areas shall be sprayed daily as needed;
- Permanent dust control measures identified in the approved project revegetation and landscape plans shall be implemented as soon as possible following completion of any soil disturbing activities;
- Exposed ground areas that are planned to be reworked at dates greater than one month after initial grading shall be sown with a fast germinating, non-invasive grass seed and watered until vegetation is established;
- All disturbed soil areas not subject to revegetation shall be stabilized using approved chemical soil binders, jute netting, or other methods approved in advance by the SLOAPCD;
- All roadways, driveways, sidewalks, etc. to be paved shall be completed as soon as possible after grading unless seeding or soil binders are used;
- Vehicle speed for all construction vehicles shall not exceed 15 mph on any unpaved surface at the construction site;
- All trucks hauling dirt, sand, soil, or other loose materials are to be covered or shall maintain at least two feet of freeboard (minimum vertical distance between top of load and top of trailer) in accordance with California Vehicle Code Section 23114;
- Install wheel washers where vehicles enter and exit unpaved roads onto streets, or wash off trucks and equipment leaving the site;
- Sweep streets at the end of each day if visible soil material is carried onto adjacent paved roads. Water sweepers with reclaimed water shall be used where feasible;
- All of these fugitive dust mitigation measures shall be shown on grading and building plans; and
- The contractor or builder shall designate a person or persons to monitor the fugitive dust emissions and enhance the implementation of the measures as necessary to minimize dust complaints, reduce visible emissions below 20 percent opacity, and to prevent transport of dust offsite. Their duties shall include holidays and weekend periods when work may not be in progress. The name and telephone number of such persons shall be provided to the SLOAPCD Compliance Division prior to the start of any grading, earthwork or demolition.

Diesel Vehicles and Equipment Emissions Control Measures

For diesel powered construction activity in close proximity to sensitive receptor, the applicant shall implement the following idling control techniques:

- On-road diesel vehicles shall comply with Section 2485 of Title 13 of the California Code of Regulations.
- Off-road diesel equipment shall comply with the five-minute idling restriction identified in Section 2449(d)(2) of the California Air Resources Board's In-Use Off-Road Diesel Regulation.
- Signs must be posted in the designated queuing areas and job sites to remind drivers and operators of the State's five-minutes idling limit.
- Staging and queuing areas shall not be located within 1,000 feet of sensitive receptors.
- Diesel idling within 1,000 feet of sensitive receptors shall not be permitted.
- Use of alternative fueled equipment is recommended.
- Signs that specify the no idling areas must be postponed and enforced at the site.
- Proposed truck routes should be evaluated and selected to ensure routing patterns have the least impact to residential dwellings and other sensitive receptors such as schools, parks, daycare centers, nursing homes, and hospitals.
- Portable construction equipment, 50 horsepower or greater, must possess or obtain California statewide portable equipment registration (issued by CARB) or a SLOAPCD permit.

The project does not exceed any SLOACPD emissions thresholds and therefore, would result in less than significant impacts to air quality. The measures listed above would serve to reduce emissions even more and impacts of project construction to air quality would remain less than significant.

Threshold:	Would the project violate any air quality standard or contribute substantially to an existing or projected air quality violation?
Threshold:	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 AIR-3 CRITERIA POLLUTANTS GENERATED BY PROJECT OPERATION WOULD NOT EXCEED ANY APPLICABLE SLOAPCD THRESHOLDS. IMPACTS WOULD BE CLASS III, LESS THAN SIGNIFICANT.

Operation of the project would result in ongoing emissions associated with vehicle trips, natural gas use, and area sources, such as landscaping, consumption of consumer products, and off-gassing from architectural coatings. Daily and annual operational emissions associated with the proposed project are shown in Table 13 and Table 14 (see Appendix C for complete CalEEMod results), and compared to the applicable SLOAPCD operational emissions thresholds.

Table 13 Estimated Operational Daily Air Pollutant Emissions

	Emissions (lbs/day)			
Source	**ROG + NOX**	**DPM**	**Dust**	**CO**
Total Daily Emissions	2.8	0.1	1.1	5.6
SLOAPCD Daily Thresholds	25	1.25	25	550
Threshold Exceeded?	No	No	No	No

Notes: All calculations were made using CalEEMod winter emissions output (refer to Appendix C). DPM equal to combined exhaust PM_{10} and $PM_{2.5}$ from CalEEMod. Dust equal to fugitive PM_{10} from CalEEMod. Maximum emissions include on-site and off-site emissions.

Table 14 Estimated Operational Annual Air Pollutant Emissions

	Emissions (tons/year)	
Source	**ROG + NOX**	**Dust**
Total Annual Emissions	0.5	0.2
SLOAPCD Annual Thresholds	25	25
Threshold Exceeded?	No	No

Notes: All calculations were made using CalEEMod annual emissions output (refer to Appendix C). Dust equal to fugitive PM_{10} from CalEEMod. Maximum emissions include on-site and off-site emissions.

As shown in Table 13 and Table 14, the project's operational emissions would not exceed SLOAPCD's daily or annual operational emissions thresholds.

Although the project's operational emissions would not exceed daily or annual operational emissions thresholds, the following measures would be required as conditions of approval for the project, as recommended by SLOAPCD, to further reduce and/or avoid operation emissions from the project:

Operation Phase Emission Control Measures

- **Agricultural Burning** – Agricultural operations must obtain an APCD Agricultural Burn Permit to burn agricultural vegetation on Permissive Burn Days. CARB provides educational handbooks on agricultural burning (English and Spanish) to growers, which are available on the following website: https://www.arb.ca.gov/smp/progdev/pubeduc/protocol_tools.htm
- **Residential Wood Combustion** – Under APCD Rule 504, only APCD approved wood burning devices can be installed in new dwelling units. These devices include:
  - All EPA-Certified Phase II wood burning devices;
  - Catalytic wood burning devices which emit less than or equal to 4.1 grams per hour of particulate matter which are not EPA-Certified but have been verified by a nationally-recognized testing lab;
  - Non-catalytic wood burning devices which emit less than or equal to 7.5 grams per hour of particulate matter which are not EPA-Certified but have been verified by a nationally-recognized testing lab;
  - Pellet-fueled wood heaters; and

- Dedicated gas-fired fireplaces.

- **Operational Permit Requirements –** The applicant is required to obtain an APCD permit for operations involving:
  - New wineries or winery expansion with the capacity of 26,000 gallons (10,000 cases at 12 750-milliliter bottles per case) per year or more require a Permit to Operate for fermentation and storage of wine.
  - Portable generators and equipment with engines that are 50 horsepower or greater.

  Most facilities applying for an Authority to Construct or Permit to Operate with stationary diesel engines greater than 50 horsepower should be prioritized or screened for facility wide health risk impacts. A diesel engine-only facility limited to 20 non-emergency operating hours per year or that has demonstrated to have overall diesel particulate emissions less than or equal to two pounds per year does not need to do additional health risk assessment. To minimize delays, the project applicant should contact APCD Engineering and Compliance Division at (805) 781-5912 for specific information regarding permitting requirements prior to the start of the project.

The project does not exceed any SLOACPD emissions thresholds. Additionally, the measures listed above would be required for the project to further reduce potential operational emissions from the project. Therefore, potential impacts of project operations to air quality would be less than significant.

Threshold:	Would the project expose sensitive receptors to substantial pollutant concentrations?

Impact AIR-4 THE PROJECT WOULD NOT EXPOSE SENSITIVE RECEPTORS TO SUBSTANTIAL POLLUTANT CONCENTRATIONS. THIS IMPACT WOULD BE CLASS III, LESS THAN SIGNIFICANT.

The primary sources of toxic air contaminant emissions include high traffic freeways and roads, distribution centers, rail yards, ports, refineries, chrome plating facilities, dry cleaners, and large gas dispensing facilities. None of these uses existing in close proximity to the project site. SLOAPCD also requires any project with grading areas greater than 4.0 acres or that are within 1,000 feet of any sensitive receptor to implement standard fugitive dust and diesel emissions control measures (described in Mitigation Measures AQ-1 and AQ-2). Therefore, potential impacts from exposure of sensitive receptors to substantial pollutant concentrations generated from such uses would be less than significant.

Naturally occurring asbestos (NOA) has been identified by the State Air Resources Board as a toxic air contaminant. Serpentine and ultramafic rocks are common in San Luis Obispo County and may contain naturally occurring asbestos. According to the SLOAPCD NOA Map for San Luis Obispo County, the project site is not located in an area that is known to contain naturally occurring asbestos (SLOAPCD 2016). Therefore, impacts associated with naturally occurring asbestos would be less than significant.

a. Cumulative Impacts

In San Luis Obispo County, impact thresholds have been established to assess a project's effect on the regional air quality. A project that does not exceed SLOAPCD thresholds and is consistent with the 2001 CAP is considered to have a less than significant cumulative impact on the airshed. Conversely, a project that exceeds the SLOAPCD significance thresholds or is found to be

inconsistent with the CAP is considered to result in significant cumulative impacts. The project would not exceed local thresholds and would be consistent with the 2001 CAP. As such, the project would not substantially contribute to cumulative air quality impacts. Cumulative impacts to air quality would be less than significant.

4.4 Biological Resources

This section addresses biological resources issues related to the project described in Section 2.0, *Project Description*. The information presented in this section is derived from documents contained in the following appendices to this EIR:

- **Appendix D.1:** Biological Report Vesting Tentative Tract 2429 Jack Ranch Cluster Subdivision (Althouse and Meade, Inc. 2016)
- **Appendix D.2:** Letter regarding Jack Ranch Agricultural Cluster Project EIR: Results of Biological Resources Reconnaissance Survey (Rincon 2017a)
- **Appendix D.3.** *Special Status Species Potential for Occurrence Evaluation* (Rincon 2017b), supported by Database Query Results (enclosed in appendix; CNPS 2017; CDFW 2017a; USFWS 2017a)

The biological conditions of the property, with a focus on the footprint of the project, were evaluated within a Biological Study Area (BSA) that focuses the on areas impacted by the project and the surrounding vicinity (Figure 14). The BSA encompasses approximately 299 acres. Rincon reviewed available biological and natural resources databases, aerial photographs, topographic maps, and literature resources, including reports from nearby sites, as part of this analysis. Resources reviewed include data on special status species and sensitive habitat information obtained from the California Department of Fish and Wildlife (CDFW) California Natural Diversity Data Base (CNDDB) (2017a), the California Native Plant Society Online Inventory of Rare and Endangered Plants of California (2017), and the United States Fish and Wildlife Service (USFWS) Information, Planning and Conservation System (IPaC) (2017a). The USFWS Critical Habitat Mapper (2017b) and National Wetlands Inventory (NWI; 2017c) were also queried. Additionally, the National Marine Fisheries Service (NMFS), National Oceanic and Atmospheric Administration (NOAA) Critical Habitat on the West Coast webpage (2017) and pertinent critical habitat designations (NOAA NMFS 2005) were reviewed for regionally pertinent information.

Rincon biologists conducted a site survey on February 23, 2017, (Rincon 2017a) to confirm location and extent of resources reported in the 2016 Althouse and Meade, Inc. report, to review potential habitat for special status plants and animals, and to refine resource descriptions and analysis provided herein.

4.4.1 Setting

a. Regional Setting

The BSA is in unincorporated San Luis Obispo County a few miles south of the City of San Luis Obispo at the west edge of the Edna Valley. It is within the southern portion of the Outer South Coast Ranges ecoregion. Land uses in the region surrounding the site include agricultural operations, including rangeland, row crops, orchards, and vineyards; a golf course; rural residential development; open space; and an airport approximately one mile north of the BSA. The BSA is bounded by residential land use along the northern boundary, residential and recreational land use on the east side of Caballeros Avenue, and rural residential and open space on the south and west boundaries. Plant communities in the region include oak woodlands, riparian, chaparral, coastal

Figure 14 Biological Study Area

Imagery provided by Google and its licensors © 2017.
Additional data provided by Althouse and Meade, Inc. 2016

scrub, and grassland habitats. Habitat types in close proximity to the site include grasslands, oak woodlands, riparian and wetland habitats, ornamental landscaping that surrounds residences, including manicured lawns of residences and a golf course, as well as vineyards and other active agricultural fields.

b. Project Site Setting

As noted in Section 3, the approximately 299-acre site consists of approximately 163 acres of existing and proposed vineyards and associated access roads, of which approximately 145 acres are currently planted with vines. An additional approximately 11.6 acres of recently cleared area, immediately adjacent to existing vineyards, were planted with a barley cover crop in 2017. An unnamed intermittent tributary to Davenport Creek crosses through the existing vineyards, draining southeast to northwest, and contains riparian habitat with wetland understory, bordered by the vineyards on either side (Figure 15). The majority of the site is characterized by gentle slopes on either side of the intermittent tributary to Davenport Creek, planted with vineyards. Approximately 106 acres in the southwestern portion of the BSA consist of natural vegetation communities. This area is steeper and contains grassland and oak woodland vegetation. Cattle graze this part of the BSA periodically. Two unnamed ephemeral streams originate in the hills south-southwest of the BSA, and flow north and westward, ultimately joining tributaries to Davenport Creek. Wetlands are present in the intermittent stream, and in seeps on some of the southern hills. Remaining areas are ruderal, disturbed, or developed/landscaped.

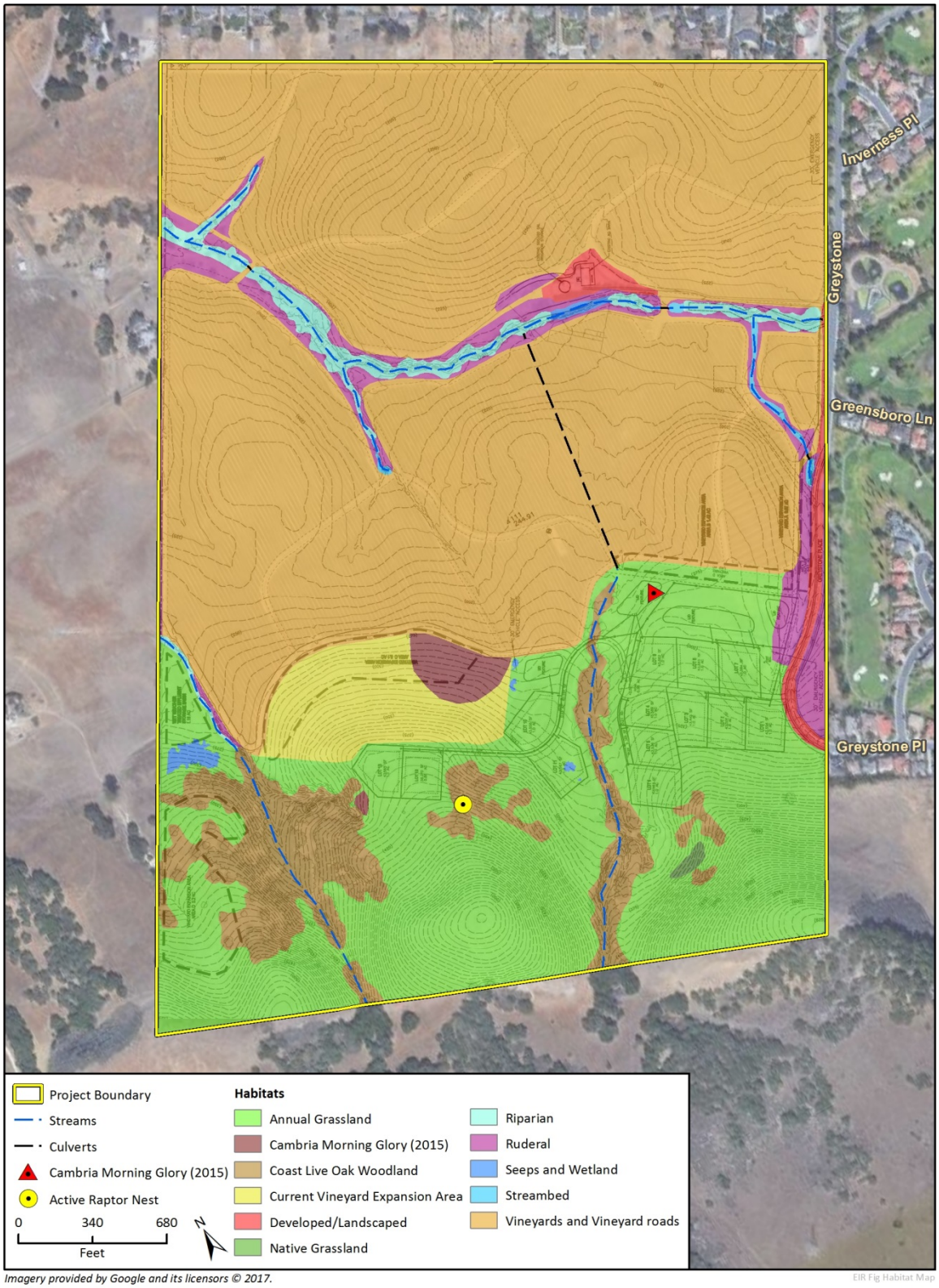
The project site occurs within the *San Luis Obispo, California* United States Geological Survey (USGS) 7.5-minute topographic quadrangle in the Coral De Piedra Land Grant. Rolling hills in the southern portion of the BSA rise steeply near the property line. Elevation in the BSA ranges from 180 feet above mean sea level (msl) within the intermittent stream to approximately 625 feet above msl on a hilltop located near the southern boundary.

Habitat Types

Eight habitat types occur on the project site (Figure 15). These include areas of natural vegetation, including coast live oak woodlands; annual grassland; native grassland; streams, riparian, and seep and wetland habitats. Some areas are highly modified and have little or no natural vegetation, including vineyards, recently cleared areas, and associated access roads; developed and landscaped areas; and ruderal habitats along roadsides and in heavily disturbed areas.

Classification of the natural vegetation types was based on Manual of California Vegetation, 2nd edition (Sawyer et al., 2009) classification system. Vineyards, recently cleared areas, developed and landscaped areas and some ruderal areas are not categorized in the Manual of California Vegetation 2nd edition, as vegetation patterns in these areas are driven by human-driven management and disturbance regimens, and these areas generally do not support natural vegetation in persisting, repeating patterns (Sawyer et al., 2009). Habitat types observed onsite were also compared to the California Wildlife Habitat Relationship System (CWHR) used by CDFW (CDFW 2014; Mayer and Laudenslayer 1988.) The CWHR defines habitats based on the composition and structure of the dominant vegetation of any given area and provides generalized information pertaining to wildlife value and use of these habitat types. Additionally, CWHR discusses agricultural areas and human-altered habitats that are not classified in the Manual of California Vegetation, 2nd Edition. Althouse and Meade Inc. (2016) classified and mapped vegetation during botanical resources surveys

Figure 15 Habitats in the Biological Study Area



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Additional data provided by Althouse and Meade, Inc. 2016

conducted in March and April 2015, and Rincon biologists further refined classification and mapping during a survey on February 23, 2017. Table 15 summarizes habitats in the BSA.

Table 15 Habitat Summary Table

Habitat Type	Approximate Acres BSA
Annual grassland	79.7
Native grassland	0.3
Coast live oak woodland	20.7
Streambed and riparian woodlands	6.1
Seeps and wetlands	0.9
Vineyard, recently cleared, and vineyard roads	176.1
Ruderal	11.0
Developed and landscaped	3.7
Total	**298.5**

c. Upland Natural Vegetation Types

Annual Grassland

Annual grassland is primarily found in the southern portion of the BSA, comprising approximately 79.7 acres. Annual grassland also intergrades with oak woodlands and provides an herbaceous cover along the stream banks. This habitat type is predominant in the proposed development footprint, and is also common on hillsides that will remain as open space. Annual grasslands in the BSA correspond to Wild oat grasslands Herbaceous Semi-Natural Alliance and the Annual brome grasslands Herbaceous Semi-Natural Alliance as described by Sawyer et al. (2009).

Annual grasslands in the BSA are dominated by non-native annual grasses and herbs, with scattered native annual wildflowers and occasional individuals of native perennial grass species. The dominant grasses in this habitat type include slender wild oat (*Avena barbata*), hare barley (*Hordeum murinum* ssp. *leporinum*) and ripgut brome (*Bromus diandrus*). Other grass species found on this habitat include Italian ryegrass (*Festuca perennis*), rattail fescue (*Festuca myuros*), annual fescue *(Festuca microstachys*) and red brome (*Bromus madritensis* ssp. *rubens*). Non-native filaree (*Erodium* spp.) is also abundant, and other non-native herbs commonly present include Italian thistle (*Carduus pycnocephalus*), sheep sorrel (*Rumex acetosella*), milk thistle (*Silybum marianum*) and vetch (*Vicia* spp.). Native herbs and wildflowers are present at low abundance, including Miner's lettuce (*Claytonia perfoliata*), Johnny jump-ups (*Viola pedunculata*), miniature lupine (*Lupinus bicolor*), and checkerbloom (*Sidalcea malviflora*). A few areas of degraded grassland habitat had a large proportion of non-native mustards, primarily black mustard (*Brassica nigra*) intermixed with brome and hare barley grasses. Sandier-textured soils are present on some southern slopes within this habitat type. This area of grassland supported California croton (*Croton californicus*), which was not common in areas with finer textured soils.

One California Rare Plant Rank (CRPR) 4 plant species was observed within the grassland habitat, Cambria morning glory (*Calystegia subacaulis* ssp. *episcopalis*) (Althouse and Meade, 2016). Suitable habitat is also present for a number of other special status plants, as discussed further under the heading "Special Status Plants" below.

Native grass species occasionally observed mixing with the non-native annual grasses onsite include purple needlegrass (*Stipa pulchra*) and creeping wild rye (*Elymus triticoides*). This type of conversion from perennial grassland to annual grassland has occurred in many areas statewide and is believed to be the result of historical grazing practices, introduction of aggressive non-native annuals, and other disturbance. The project site was historically used for cattle grazing, and the majority of grasslands in the BSA do not currently support native grass species. However, some areas of native grassland with perennial bunchgrasses remain and are described in the Purple Needlegrass Grassland section below.

Grasslands often support a variety of wildlife. Wildlife use of annual grasslands in the BSA is similar to use of native grasslands, and is described with the discussion of purple needlegrass grassland, below.

Purple Needlegrass Grassland

Purple needlegrass grassland, a CDFW sensitive natural community, accounts for approximately 0.3 acre of the BSA, on a north-facing hillside south of the proposed lot 6. It is characterized by abundant purple needlegrass, with cover exceeding 30 percent, and other native grassland species, including snakeroot (*Sanicula* sp.), lupines (*Lupinus* spp.), and soap root (*Chlorogalum pomeridianum* var. *pomeridianum*) notable in this area. A rock outcrop is present at the edge of this grassland. This stand of native grassland is well outside the proposed development footprint. It is possible additional small stands of native grassland are present in the open space portions of the site that were not surveyed in detail in 2017. This stand of native grassland meets membership rules identified in the Manual of California Vegetation, 2nd Edition (Sawyer et al. 2009), for Purple needlegrass grassland Herbaceous Alliance, and is ranked S3 on the CDFW List of Vegetation Alliances and Associations (2010). Alliances with ranks S1 through S3 are considered sensitive natural communities by CDFW.

Grassland communities in San Luis Obispo County often support communities of small mammals , such as California ground squirrel (*Otospermophilus beecheyi*) and Botta's pocket gopher (*Thomomys bottae*), though relatively few burrows were documented during field work completed in 2015 and 2017. Small mammals in turn serve as a prey base for a variety of animals, including snakes, raptors, coyotes (*Canis latrans*), and bobcat (*Lynx rufus*). Many raptors and other bird species rely on the open expanses of grasslands for forage, cover, and nest habitat. Bird species often found foraging in grasslands regionally include northern harrier (*Circus cyaneus*), red-tailed hawk (*Buteo jamaicensis*), American kestrel (*Falco sparverius*), western kingbird (*Tyrannus verticalis*), western meadowlark (*Sturnella neglecta*), black phoebe (*Sayornis nigricans*), Brewer's blackbird (*Euphagus cyanocephalus*), a variety of sparrows and goldfinches (*Spinus* spp.). Bald and golden eagles (*Haliaeetus leucocephalus; Aquila chrysaetos*) may also forage in grasslands in the region. Invertebrate species, many of which provide a food source for larger animals such as lizards, snakes, birds, and some small mammals can also be found within grassland communities. Reptiles common to grasslands include gopher snake (*Pituophis catenifer*), California kingsnake (*Lampropeltis californiae*), and common garter snake (*Thamnophis sirtalis*). Grasslands are also used as dispersal and movement corridors for a variety of wildlife species.

Coast Live Oak Woodland

Oak woodland comprises approximately 20.7 acres of the BSA and consists of predominantly mature coast live oak (*Quercus agrifolia*) trees, with canopy spacing ranging from loose groupings with openings between trees, to nearly closed-canopy. The majority of coast live oak woodland in the

BSA is outside the development footprint. California bay (*Umbellularia californica*) also occurs in low numbers this habitat. Coast live oak woodland habitat is associated with hillsides in the southern BSA, and also occurs as riparian canopy along ephemeral streams that flow down the northern slopes of the southern hills and connect to the tributary to Davenport Creek. Oak trees within project areas are limited to the vicinity of a proposed road crossing over the southeastern unnamed stream. Riparian areas and streams are discussed in more detail below. Coast live oak woodland is also present in areas identified for future vineyard expansion. Coast live oak woodland habitat in the BSA corresponds to Coast Live Oak Woodland Alliance as described in the Manual of California Vegetation, 2nd Edition (Sawyer et al. 2009). Individual oak trees are also discussed in Section 4.4-e below.

Understory composition of coast live oak woodlands can vary depending upon local edaphic conditions, such as moisture and nutrient availability, and the historical use of the land for agricultural practices, such as grazing. Within the BSA, the majority of coast live oak woodland understory consists of non-native annual grasses and forbs similar to annual grassland habitat described above. Common non-native species observed include Italian thistle, milk thistle, and ripgut brome. Understory vegetation associated with oak woodlands near the western ephemeral drainage also included occasional poison oak (*Toxicodendron diversilobum*), toyon (*Heteromeles arbutifolia*), and scattered arroyo willows (*Salix lasiolepis*). Native herbs plants observed in the oak woodland understory include goose-grass (*Galium aparine*) and goldback fern (*Pentagramma triangularis*).

Oak woodlands, in general, provide suitable habitat, cover and forage for a large variety of wildlife species. Oak trees provide forage, nest and cover for birds, mammals and reptiles. Dead and decaying oak trees with few branches or no leaves provide nest cavities and perches from which to search for prey, and resting spots for other bird species. They also contribute woody debris in the woodland understory, which provides foraging areas for small mammals and microclimates suitable for amphibians and reptiles, as well as habitat for fungi and insects. Acorns are a valuable food source for many animal species. Several wildlife species that utilize oak woodlands were observed during field surveys, including California scrub jay (*Aphelocoma californica*), western bluebird (*Sialia mexicana*), turkey vulture (*Cathartes aura*), red-tailed hawk, and mule deer (*Odocoileus hemionus*). Occasional California ground squirrel burrows were observed in the oak woodland habitat during the site visits. Other native wildlife that could occur in coast live oak woodlands include acorn woodpecker (*Melanerpes formicivorus*), western gray squirrel (*Sciurus griseus*), arboreal salamander (*Aneides lugubris*), western screech owl (*Otus kennicottii*), and oak titmouse (*Baeolophus inornatus*). Virginia opossum (*Didelphis virginianus*) are also commonly observed in local oak woodlands. An active red-tailed hawk nest was observed in an oak tree during the Rincon field survey on February 23, 2017.

d. Streams, Riparian, and Wetland Habitats

Streams

An intermittent stream with two directly connected tributary segments in the BSA, and two additional ephemeral streams are present in the BSA (Figure 15). The southwestern ephemeral stream, flowing northwest, originates in the hills south of the site in a highly erodible area where headcutting and unstable banks are notable. The banks are unstable throughout the reach of this stream. Vegetation in the southern reach of this drainage consists of oak woodland canopy with an understory of annual grasses. Sedges (*Carex* spp.) and rushes (*Juncus* spp.) are present in some areas along the edge of the streambed. The bed of the channel was largely unvegetated, and

flowing water was present during the February 2017 field survey. As a result of unstable bank and undercutting, some oak trees have fallen. Near the western property boundary, the canopy over this stream shifts from oak woodland to willow riparian scrub. A surface connection exists on aerial photos to streams west of the site, including Davenport Creek. Within the BSA, the stream measures 1,844 linear feet. This drainage is outside the proposed development footprint, but is close to proposed support facilities for the vineyard, including vineyard expansion and a basin. Implementation of those features could require construction of a stream crossing.

The southeastern stream also originates in the hills south of the site, and is also characterized by highly erodible banks near its origin. Vegetation is characterized by an oak woodland canopy, with scattered willows. A road crossing is proposed for this stream and near this crossing, five oaks are present that range in size from 6 inches to approximately 28 inches in diameter. No willows are present at the crossing location, and annual grasses and herbs dominate the bank vegetation. This stream flows into an existing culvert at the point where this drainage meets the vineyard. The probable outfall of this culvert is the northern intermittent stream. Thus, this drainage is likely connected with the intermittent tributary to Davenport Creek. Within the BSA, the above-ground stream reach measures 2,218 linear feet.

The unnamed intermittent tributary of Davenport Creek flows westward through the vineyard. This tributary is characterized by a well-developed willow riparian canopy with patches of wetland understory, described below. This drainage is outside of the proposed development footprint. Within the BSA, this stream reach measures 3,337 linear feet.

Riparian Woodlands

As noted above, one intermittent stream and two ephemeral streams are present in the BSA, and riparian woodlands are present in some reaches. Riparian willow woodland is associated with the unnamed tributary of Davenport Creek that runs through the vineyard, as well as the lower reach of the western ephemeral stream. This habitat type comprises approximately 5.5 acres of the BSA. Dominant species observed include arroyo willow and red willow (*Salix laevigata*). Willow-dominated riparian areas are outside the development footprint. Occasional coast live oak trees are interspersed among the dominant willow cover. The understory in the intermittent stream is variable. In some areas, understory includes shrubs such as coyote brush (*Baccharis pilularis*), California blackberry (*Rubus ursinus*), and mugwort (*Artemisia douglasiana*). In other areas, the understory is herbaceous wetland, with hydrophytic species such as cattail (*Typha angustifolia*), tule (*Schoenoplectus californica*) and rush. In the lower reach of the western ephemeral stream, the riparian woodland is less developed and consists primarily of young willow shrubs with little understory. Riparian habitat within the project area corresponds to the Arroyo willow thickets Shrubland Alliance as described in the Manual of California Vegetation, 2nd Edition (Sawyer et al. 2009).

Wetlands

Areas vegetated with wetland species occupy 0.9 acre of the BSA; in addition to wetland vegetation within the intermittent stream, some areas with hydrophytic vegetation were documented in 2017 that are potential seep wetlands. These areas were saturated and seeping water during the February site visit. The seep areas are vegetated with a mosaic of facultative and hydrophytic vegetation, including brown-headed rush (*Juncus phaeocephalus*), western rush (*Juncus occidentalis*), spikerush (*Eleocharis macrostachya*), dock (*Rumex* sp.), and loosestrife (*Lythrum* sp.), in addition to facultative and upland species such as filaree (*Erodium* spp.), Italian ryegrass, and

bristly ox tongue (*Helminthotheca echioides*). Spikerush, brown-headed rush, and western rush are perennial species that typically require soils that are moist to saturated for long durations to persist, indicating these locations are typically wetter than surrounding areas. Wetlands in the BSA correspond to the Pale Spike Rush Marshes and Cattail Marshes Alliances described by Sawyer and Keeler-Wolf (2009).

Wetland, riparian, and stream communities are important habitats for wildlife. These habitats provide food, cover, water and serve as movement corridors for a variety of wildlife species including migratory birds, reptiles, amphibians and mammals. Riparian vegetation provides structure, materials, and food sources for foraging, nesting and roosting animals. Many species forage within the understory, and use riparian habitat as cover and as a corridor for movement along the edges of open areas. Common wildlife species found in stream and riparian habitats regionally include amphibians and reptiles such as the Sierran treefrog (*Pseudacris sierra*) and western fence lizard (*Sceloporus occidentalis*), and mammals such as raccoon (*Procyon lotor*), Virginia opossum, striped skunk (*Mephitis mephitis*), big-eared woodrat (*Neotoma fuscipes*), cottontail (*Sylvilagus audubonii*), and shrews (*Sorex* spp.). Riparian woodland habitat also supports a diverse number of resident and migratory bird species, including house wren (*Troglodytes aedon*), ruby-crowned kinglet (*Regulus calendula*), warbling vireo (*Vireo gilvus*), Wilson's warbler (*Cardellina pusilla*), common yellowthroat (*Geothlypis trichas*), red-winged blackbird (*Agelaius phoeniceus*) and other icterid species, and sharp-shinned hawk (*Accipiter striatus*).

Additionally, the intermittent stream and associated riparian area could be used as a dispersal corridor for special status amphibian species such as California red-legged frog (*Rana draytonii*) and western pond turtle (*Emys marmorata*) when water is present to move between aquatic habitats.

e. Highly Modified Habitat Types

Vineyard, Recently Cleared Areas, and Agricultural Operations

With approximately 163 acres of existing and proposed vineyards and associated access roads, agriculture is the dominant land use in the BSA. Vineyards require a high level of maintenance and contribute relatively low-quality habitat for native plants and animals. Disturbed areas adjacent to vineyards support a mixture of ruderal (weedy) plant species and non-native annual grasses and forbs. This habitat type occurs on the central to northern portion the project site. Agricultural habitat types are not described in Sawyer et al. (2009) classification system.

Additionally, included in the total existing and proposed vineyard area, a recently disked area of approximately 11.6 acres in size immediately adjoining the south edge of established vineyards was observed in 2017. This area extends up a hillside adjacent to proposed development areas. In this area, the site has been plowed in recent years and planted with a cover crop that includes barley (*Hordeum vulgare*) and some annual grasses, including rattail fescue. Vineyard stakes and posts had been placed, although vines were not planted and posts and stakes were not installed.

Vineyards support birds and other wildlife adapted to rural and suburban settings where species are not affected by a regular cycle of disturbance. Birds that may use the vineyards for forage, cover, and nesting include northern mockingbird (*Mimus polyglottos*), sparrow species, Brewer's blackbird, and non-native European starlings (*Sturnus vulgaris*). The vineyards and areas immediately adjacent to the vineyards also provide habitat for small and medium mammals such as the raccoon, skunk, mouse species, California ground squirrel and Botta's pocket gopher. Raptors, such as red-tailed hawk, sharp-shinned hawks, and American kestrel may also use vineyards for aerial forays.

Ruderal

Vegetation that has been significantly disturbed by agriculture, construction, and other land clearing and on-going maintenance activities is typically classified as ruderal habitat. This habitat generally occurs along roadsides, field margins, and in other areas experiencing regular ground disturbance. Ruderal habitat, encompassing approximately 11 acres, is associated with the margins of vineyards, dirt roads, outbuildings and water tanks. Species associated with ruderal habitats include mayweed (*Anthemis cotula*), horseweed (*Conyza canadensis*), black mustard, wild radish (*Raphanus sativus*), sweet fennel (*Foeniculum vulgare*), milk thistle, Italian thistle, and star thistle (*Centaurea solstitialis*). In addition, a variety of non-native grasses typical of non-native annual grasslands occur in association with ruderal habitats located onsite.

Developed and Landscaped

Greystone Place is an existing paved road that crosses through the BSA. The margins are landscaped with ornamental plants. Additionally, existing structures and paved areas supporting agricultural operations are present in the BSA, including a grove of planted trees. These areas are mapped as developed and landscaped and occupy approximately 3.7 acres.

The wildlife habitat values provided by ruderal, developed, and landscaped communities are dependent on the level of on-going disturbance and the type of plants present. For example, unpaved access roads that receive very little human activities could be used by reptiles as sunning locations and by large mammals as movement corridors or grazing areas. Planted trees provide nesting and roosting habitat for birds. Structures may also provide nesting habitat, as well as potential roosts for bats. Birds may also use dirt roads for dusting and for obtaining gravel. Ruderal habitat provides low or minimal habitat value for wildlife. Wildlife using this habitat is similar to the vineyard habitat.

f. Special Status Species and Sensitive Natural Communities

For the purpose of this analysis, special status species are defined as those plants and animals listed, proposed for listing, or candidates for listing as threatened or endangered by the USFWS and NMFS under the federal Endangered Species Act (FESA); those listed or proposed for listing as rare, threatened, or endangered by the CDFW under the California Endangered Species Act (CESA); animals designated as “Species of Special Concern” or “Fully Protected” by the CDFW; and plants with a California Rare Plant Rank (CRPR) of 1 or 2, which are defined as:

- Rank 1A = Plants presumed extinct in California;
- Rank 1B.1 = Rare or endangered in California and elsewhere; seriously endangered in California (over 80% of occurrences threatened/high degree and immediacy of threat);
- Rank 1B.2 = Rare or endangered in California and elsewhere; fairly endangered in California (20-80% occurrences threatened);
- Rank 1B.3 = Rare or endangered in California and elsewhere, not very endangered in California (<20% of occurrences threatened or no current threats known);
- Rank 2 = Rare, threatened or endangered in California, but more common elsewhere;

CDFW standards state that species ranked 1A, 1B, 2A, and 2B may meet definitions of rare or endangered under CEQA Sections 15380 (b) and (d) (CDFW 2017c). By CNPS standards, the plants of CRPR Ranks 1A, 1B, 2A and 2B meet the definitions of Sections 2062 and 2067 (CESA) of the California Fish and Game Code and are eligible for state listing and, therefore, should be considered

under CEQA §15380. According to CDFW, "In general, CNPS List 3 plants (plants about which more information is needed) and List 4 plants (plants of limited distribution) may not warrant consideration under CEQA §15380. These plants may be included on special status plant lists such as those developed by counties where they would be addressed under CEQA §15380. Factors such as regional rarity versus statewide rarity should be considered in determining whether cumulative impacts to a List 4 plant are significant even if individual project impacts are not."

CRPR rank 3 and 4 are defined as:

- Rank 3 = Plants needing more information (most are species that are taxonomically unresolved;
- Rank 4 = Plants of limited distribution (watch list)

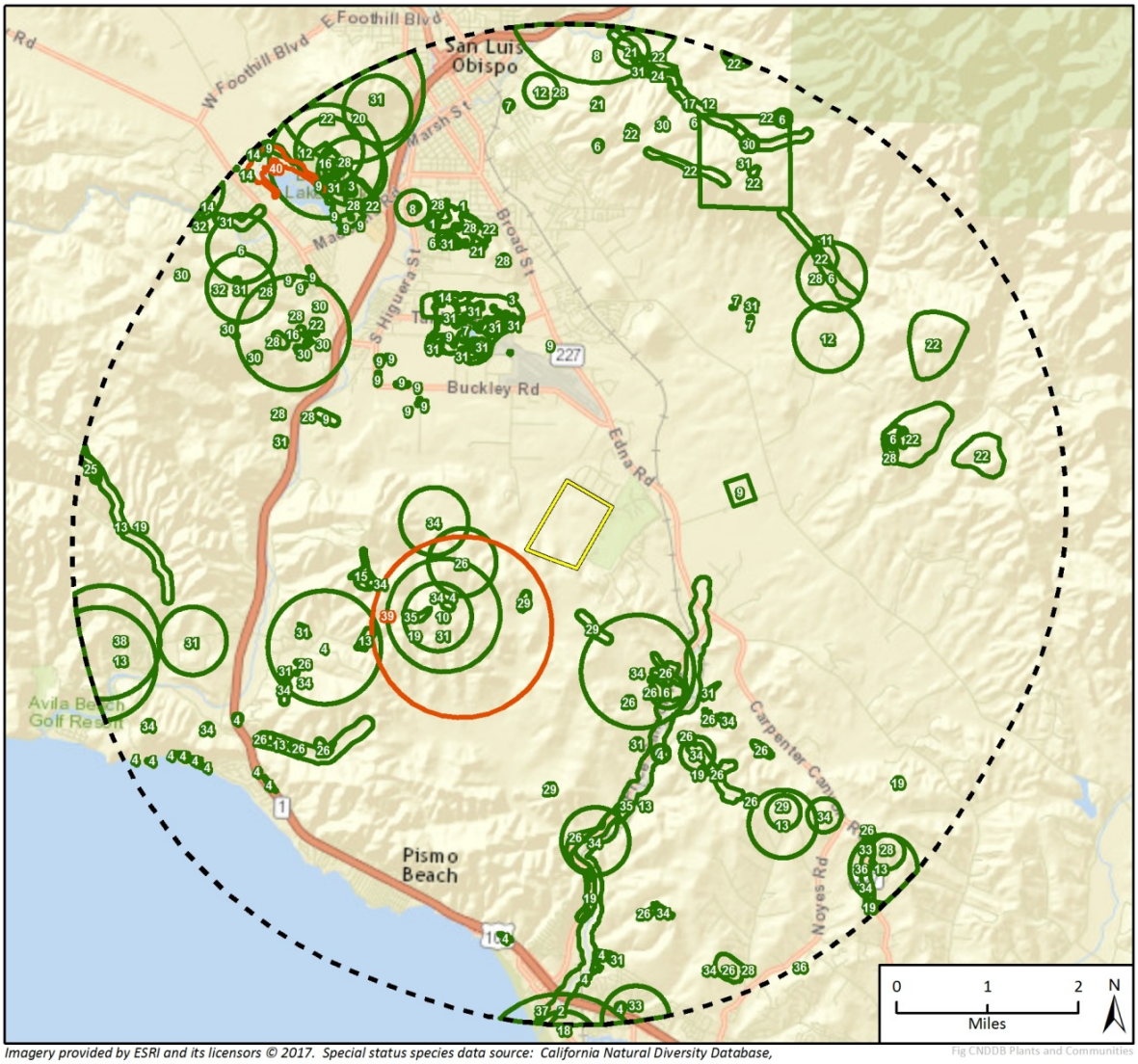
The County of San Luis Obispo does not typically consider CRPR 3 and 4 species as a special status. However, some CRPR 3 and 4 species may have special consideration due to local population numbers. Cambria morning glory (*Calystegia subacaulis* ssp. *episcopalis;* CRPR 4.2) was detected in the BSA and, due to County policy, is analyzed and discussed herein. No other type localities or unique vegetation types of which CRPR 3 or 4 species are a component are present in the BSA, thus no other CRPR 3 and 4 species were considered special status in this analysis.

A query of the CNDDB (CDFW, 2017), California Native Plant Society (CNPS,2017), and USFWS ECOS (2017) resulted in 73 special status plants, 28 special status animals, and nine sensitive natural communities that occur within a seven USGS 7.5-minute topographic quadrangle (quad) search area centered on Pismo Beach quad. The remaining quads searched are Oceano, Morro Bay South, Lopez Mountain, San Luis Obispo, Arroyo Grande North East, and Port San Luis.

Appendix D.3 provides the complete query results, and provides the analysis narrowing the list to those species with potential to occur. Specifically, for each special status species, the potential to occur was assessed as present, high potential, moderate potential, low potential, or absent for each portion of the project. A species is "present" if the species or sign of its presence was observed. A species has "high potential" to occur if the species or sign of the species has not been observed but the species is reasonably likely to occur, or if there are known records in similar habitats nearby or overlapping the study areas. A species occurrence has "moderate potential" to occur if the species or sign of the species has not been observed but habitat conditions suitable for the species are present. A species has "low potential" to occur if the species or sign has not been observed and only marginal habitat conditions for the species are present. A species is "absent" if the species or sign has not been observed and habitat conditions are unsuitable for the species. The full analysis for all species returned by database queries and literature reviews is appended (Appendix D.3).

Figure 16 and Figure 17 generally map the CNDDB occurrences of special status plants, wildlife, sensitive plant communities and federally designated or proposed critical habitats within five miles of the project site. Although designated critical habitat for steelhead is present within five miles of the site, in drainages both to the east and west of the BSA, drainages on the site are not designated critical habitat, and federal designated or proposed critical habitats do not occur on the BSA (USFWS 2017; NMFS 2017). Table 16 presents all species with at least some potential to occur in the BSA.

Figure 16 CNDDB Occurrences of Special Status Plants and Sensitive Natural Communities Five Miles of the BSA



Imagery provided by ESRI and its licensors © 2017. Special status species data source: California Natural Diversity Database, January, 2017. Additional suppressed records reported by the CNDDB known to occur or potentially occur within this search radius include: prairie falcon. For more information please contact the Department of Fish and Game.

Fig CNDDB Plants and Communities

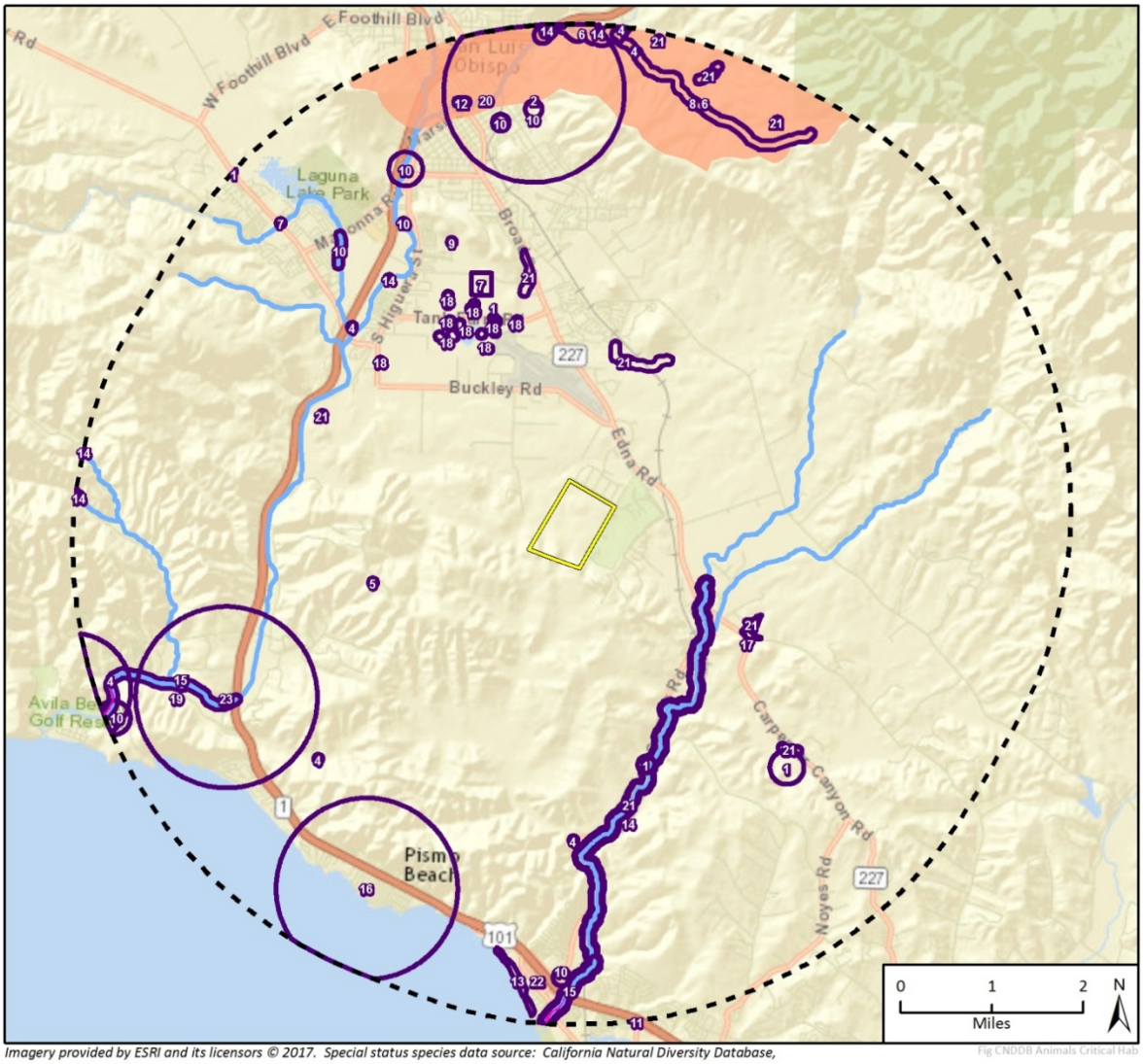
Project Boundary
5 Mile Buffer

CNDDB

Plants
Natural Communities

1 - adobe sanicle
2 - beach spectaclepod
3 - Betty's dudleya
4 - black-flowered figwort
5 - Blochman's dudleya
6 - Brewer's spineflower
7 - Cambria morning-glory
8 - chaparral ragwort
9 - Congdon's tarplant
10 - dune larkspur
11 - dwarf soaproot
12 - Eastwood's larkspur
13 - Hoover's bent grass
14 - Hoover's button-celery
15 - Indian Knob mountainbalm
16 - Jones' layia
17 - La Panza mariposa-lily
18 - marsh sandwort
19 - mesa horkelia
20 - Miles' milk-vetch
21 - most beautiful jewelflower
22 - mouse-gray dudleya
23 - Ojai fritillary
24 - Palmer's monardella
25 - Pecho manzanita
26 - Pismo clarkia
27 - saline clover
28 - San Luis mariposa-lily
29 - San Luis Obispo County lupine
30 - San Luis Obispo fountain thistle
31 - San Luis Obispo owl's-clover
32 - San Luis Obispo sedge
33 - sand mesa manzanita
34 - Santa Margarita manzanita
35 - southern curly-leaved monardella
36 - straight-awned spineflower
37 - surf thistle
38 - umbrella larkspur
39 - Central Maritime Chaparral
40 - Coastal and Valley Freshwater Marsh

Figure 17 CNDDB Occurrences of Special Status Animals and Sensitive Natural Communities Five Miles of the BSA



Imagery provided by ESRI and its licensors © 2017. Special status species data source: California Natural Diversity Database, January, 2017. Additional suppressed records reported by the CNDDB known to occur or potentially occur within this search radius include: prairie falcon. For more information please contact the Department of Fish and Game. Critical habitat data source: U.S. Fish and Wildlife Service, December, 2016. Final critical habitat acquired via the USFWS Critical Habitat Portal. It is only a general representation of the data and does not include all designated critical habitat. Contact USFWS for more specific data.

Project Boundary
5 Mile Buffer

CNDDB

Animals

Critical Habitat

California red-legged frog
Tidewater goby
Steelhead

1 - American badger
2 - Atascadero June beetle
3 - burrowing owl
4 - California red-legged frog
5 - coast horned lizard
6 - Coast Range newt
7 - ferruginous hawk
8 - foothill yellow-legged frog
9 - loggerhead shrike
10 - monarch - California overwintering population
11 - obscure bumble bee
12 - pallid bat
13 - sandy beach tiger beetle
14 - steelhead - south-central California coast DPS
15 - tidewater goby
16 - Townsend's big-eared bat
17 - tricolored blackbird
18 - vernal pool fairy shrimp
19 - western bumble bee
20 - western mastiff bat
21 - western pond turtle
22 - western snowy plover
23 - western yellow-billed cuckoo

Table 16 Special Status Species with Potential to Occur

Scientific Name Common Name	Status Fed / State ESA G-Rank / S-Rank CDFW or CRPR Status	Habitat Requirements	Potential for Occurrence and Basis for Determination
Plants			
Agrostis hooveri Hoover's bent grass	None/None G2 / S2 1B.2	Chaparral, cismontane woodland, closed-cone coniferous forest, valley and foothill grassland. Sandy sites. 60-765 m.	Moderate potential Suitable foothill grassland is present in the BSA. This species was not observed during surveys.
Astragalus didymocarpus var. *milesianus* Miles' milk-vetch	None/None G5T2 / S2 1B.2	Coastal scrub and grasslands. Clay soils. 50-385 m.	Low potential. Marginally suitable grassland habitat and clay soils are present in the BSA. This species was not observed during surveys.
Calystegia subacaulis ssp. *episcopalis* Cambria morning-glory*	None/None 4.2 G3T3 / S3	Dry, open, scrub, woodland, or grassland. 60-500m (200-1640ft).	Present. This species was observed in the annual grassland habitat during both 2015 and 2017 surveys.
Castilleja densiflora var. *obispoensis* San Luis Obispo owl's-clover	None/None G5T2 / S2 1B.2	Valley and foothill grassland, meadows and seeps. Sometimes on serpentine. 10-485 m.	Moderate potential. Suitable foothill grassland habitat is present in the BSA. This species was not observed during surveys.
Clarkia speciosa ssp. *immaculata* Pismo clarkia	FE/CR G4T1 / S1 1B.1	Chaparral, cismontane woodland, valley and foothill grassland. On ancient sand dunes not far from the coast. Sandy soils, openings. 25-185 m.	Moderate potential. Suitable foothill grassland is present in the BSA. This species was not observed during surveys.
Lupinus ludovicianus San Luis Obispo County lupine	None/None G1 / S1 1B.2	Chaparral, cismontane woodland. Open areas in sandy soil, Santa Margarita formation. 85-525 m.	Moderate potential. Suitable grassland habitat and soils are present in the BSA. This species was not observed during surveys.
Amphibians			
Rana draytonii California red-legged frog	Threatened/-- G2G3 / S2S3 SSC	Lowlands & 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.	Low potential. Dispersal habitat is present; however sufficient pools for breeding are not present in the BSA.
Birds			
Athene cunicularia burrowing owl	None/None G4 / S3 SSC	Open, dry annual or perennial grasslands, deserts & scrublands characterized by low-growing vegetation. Subterranean nester, dependent upon burrowing mammals, most notably, the California ground squirrel.	Moderate potential. Suitable habitat is present in the grassland within the BSA though burrows are not abundant. This species was not observed during surveys.

Scientific Name Common Name	Status Fed / State ESA G-Rank / S-Rank CDFW or CRPR Status	Habitat Requirements	Potential for Occurrence and Basis for Determination
Elanus leucurus white-tailed kite	None/None G5 / S3S4 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.	Moderate potential. Suitable nesting habitat is present in the trees within the BSA.
Lanius ludovicianus loggerhead shrike	None/None G4 / S4 SSC	Broken woodlands, savannah, pinyon-juniper, Joshua tree, & riparian woodlands, desert oases, scrub & washes. Prefers open country for hunting, with perches for scanning, and fairly dense shrubs and brush for nesting.	Low potential (nesting). Marginal habitat is present in the BSA. This species was not observed during surveys.
Reptiles			
Anniella pulchra pulchra silvery legless lizard	None/None G3G4T3T4Q / S3 SSC	Sandy or loose loamy soils under sparse vegetation. Soil moisture is essential. Prefers soils with high moisture content.	Moderate potential. Suitable habitat and soils are present in the BSA. This species was not observed during surveys.
Emys marmorata western pond turtle (= *Actinemys pallida* southern western pond turtle)	None/None G3G4 / S3 SSC	A thoroughly aquatic turtle of ponds, marshes, rivers, streams & irrigation ditches, usually with aquatic vegetation, below 6000 ft elevation. Need basking sites and suitable (sandy banks or grassy open fields) upland habitat up to 0.5 km from water for estivation.	Low potential. Marginally suitable aquatic habitat is present in the BSA. This species was not observed during surveys.
Mammals			
Antrozous pallidus pallid bat	None/None G5 / S3 SSC	Deserts, grasslands, shrublands, woodlands & 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.	Moderate potential. Suitable habitat is present in the trees in the BSA. This species was not observed during surveys.
Taxidea taxus American badger	None/None G5 / S3 SSC	Most abundant in drier open stages of most shrub, forest, and herbaceous habitats, with friable soils. Needs sufficient food, friable soils & open, uncultivated ground. Preys on burrowing rodents. Digs burrows.	Moderate potential. Marginally suitable grassland habitat is present in the BSA. This species was not observed during surveys.

* California Rare Plant Rank (CRPR) 4 plant species. The County of San Luis Obispo does not typically consider CRPR 3 and 4 species as special status. However, some CRPR 3 and 4 species may have special consideration due to local population numbers. Cambria morning glory (Calystegia subacaulis ssp. episcopalis; CRPR 4.2) was detected in the BSA and, due to County policy, is included herein.
Regional Vicinity refers to within a 5-mile radius of site.
FT = Federally Threatened SE = State Endangered
FC = Federally Candidate ST = State Threatened
FE = Federally Endangered SR = State Rare
FD = Federally Delisted SD = State Delisted
SSC = CDFW Species of Special Concern FP = CDFW Fully Protected WL: CDFW Watch List

Scientific Name Common Name	Status Fed / State ESA G-Rank / S-Rank CDFW or CRPR Status	Habitat Requirements	Potential for Occurrence and Basis for Determination

G-Rank/S-Rank = Global Rank and State Rank as per NatureServe and CDFW's CNDDB RareFind 5.
G1 or S1 - Critically Imperiled Globally or Subnationally (state)
G2 or S2 - Imperiled Globally or Subnationally (state)
G3 or S3 - Vulnerable to extirpation or extinction Globally or Subnationally (state)
G4 or S4 - Apparently secure Globally or Subnationally (state)
G5 or S5 - Secure Globally or Subnationally (state)
? – Inexact Numeric Rank
T – Intraspecific Taxon (subspecies, varieties, and other designations below the level of species)
Q – Questionable taxonomy that may reduce conservation priority
Source: CNDDB RareFind 5, (CDFW 2017); CNPS Online Inventory of Rare and Endangered Plants (2017); USFWS IPaC (2017a)

Special Status Plants

Based on the background database and literature review, 73 special status plant species are reported to occur regionally (Appendix D.3), with an additional 35 species ranked CRPR 3 or 4, within the quadrangles surrounding the site. However, many of the special status plant species were eliminated from consideration based on known restrictions in range or the absence of suitable habitat, including lack of suitable soil substrate and absence of appropriate vegetation communities. Five special status plants have the potential to occur on the project site. Cambria morning glory, was also observed in the BSA and included herein:

- **Hoover's bent grass (*Agrostis hooveri*)** is a CRPR 1B.2 perennial bunchgrass endemic to San Luis Obispo and Santa Barbara Counties. It is a perennial bunchgrass that occurs in sandy soils, typically in chaparral and oak woodlands, and appropriate sandy soils and oak woodlands occur in the BSA. The species is reported from approximately one mile of the site to the southeast (CNDDB 10). However, seasonally timed surveys conducted in 2015 did not detect this species, and it was not observed during 2017 surveys. A perennial grass would have been identifiable despite drought in 2015 and would have been visible in February 2017, thus, this species is not expected in the development footprint.
- **Mile's milk-vetch (*Astragalus didymocarpus* var. *milesianus*)** is a CRPR 1B.2 annual herb that typically occurs on clay soils, usually in coastal scrub or grassland habitats. Some grasslands with clay soils are present in the BSA. The species is reported from approximately four miles north of the BSA at South Hills (CNDDB 7). However, seasonally timed surveys conducted in 2015 did not detect this species, thus this species is not expected in the development footprint.
    - Cambria morning glory (*Calystegia subacaulis* ssp. *episcopalis*) is a CRPR 4.2 annual herb that typically occurs in dry, open grassland, scrub, or woodland habitats. Cambria morning glory was recently downgraded from CRPR 1B to CRPR 4 because it was found to be more common than previously thought. Cambria morning glory was observed during the field surveys (Althouse and Meade, 2016; Rincon 2017). This species was observed in multiple locations, including within the recently cleared vineyard area, sites in open space, as well as overlapping a proposed LID basin in the project area.
- **San Luis Obispo owl's clover (*Castilleja densiflora* var. *obispoensis*)** is a CRPR 1B.2. annual herb that typically occurs in grasslands, meadows, and occasionally seeps. It is reported from a variety of soil types, and suitable annual grassland is present. This species is reported from approximately one mile southwest of the BSA (CNDDB 49). This species is expressed sporadically, with large fluctuations in the number of individuals observed at known sites from year to year, with poor germination in drought years. The species was not observed during the

2015 survey botanical survey, although the report acknowledges that in 2015, this species was also not reliably detected at reference sites, and the species could occur in the BSA at low numbers. This species was not observed during the 2017 surveys; however, the 2017 surveys did not coincide with the bloom period of the species.

- **Pismo clarkia (*Clarkia speciosa* ssp. *immaculata*)** is a federally endangered, state rare, CRPR 1B.1. annual herb that occurs in openings in chaparral, oak woodland, and grassland, typically in sandy soils. Suitable annual grassland and sandy soils are present in portions of the BSA. This species is reported from less than one mile southwest of the site (CNDDB 27). CNDDB documentation for this occurrence indicates that the species was confirmed in flower in 2015. However, the 2015 botanical survey of the BSA was timed to coincide with the bloom period for this plant and did not detect this species in the BSA, thus this species is not expected in the development footprint. This species was not observed during the 2017 surveys; however, the 2017 surveys did not coincide with the bloom period of the species.
- **San Luis Obispo County lupine (*Lupinus ludovicianus*)** is a CRPR 1B.2 perennial herb that typically occurs in chaparral or grassy openings in oak woodland, with limestone or sandstone outcrops or sandy substrates. This species was reported from multiple occurrences less than one mile south of the BSA near Indian Knob (CNDDB 6 and 17). However, seasonally timed surveys conducted in 2015 did not detect this species, and it was not observed during 2017. A perennial herb would have been identifiable despite drought in 2015 and would have been visible in February 2017, thus, this species is not expected in the development footprint.

Special-Status Wildlife

Based on the background database and literature review, 28 special status animal species are reported to occur regionally (Appendix D.3), within the quadrangles surrounding the site, or as reported on the USFWS IPaC list. Based on site conditions, potential habitat for the following eight special status animal species occurs within the project site:

- **Burrowing owl (*Athene cunicularia*)** is a state species of special concern that occurs in open dry annual or perennial grasslands, deserts and scrublands characterized by low growing vegetation. It often utilizes California ground squirrel burrows, but is also known to utilize man-made objects such as pipes and culverts. This species has potential to occur in any of the annual grassland areas throughout the BSA; however, potentially suitable small mammal burrows were not observed in high numbers. Burrowing owl was not observed in the BSA during the 2015 and 2017 biological surveys.
- **White tailed kite (*Elanus leucurus*),** is a CDFW fully protected bird species that occurs in grasslands, dry farmed agricultural fields, savannahs and relatively open oak woodlands, and other relatively open lowland scrublands. Potential nesting and foraging habitat occurs in the in the oak woodland and grassland habitat onsite. White-tailed kite has been recorded by the Ebird (2017) within 2 miles of the BSA around the San Luis Obispo airport. The oak woodland and annual grassland provide suitable nesting and foraging habitat for this species. White-tailed kite was not observed in the BSA during the 2015 and 2017 biological surveys.
- **Loggerhead shrike (*Lanius ludovicianus*)** is a state species of special concern (SSC) that occurs in grassland, shrublands, and other open habitats with scattered shrubs and trees. Potential nesting and foraging habitat is present in the grassland and margins of the oak woodland habitats in the BSA. Loggerhead shrike has been documented by the Ebird within five miles of

the BSA, and the CNDDB reports a nesting record near South Hills. Loggerhead shrike was not observed in the BSA during the 2015 and 2017 biological surveys.

- **California red-legged frog (*Rana draytonii;* CRLF)** is federally threatened and a state SSC throughout its range. CRLF inhabits quiet pools of streams, marshes, and ponds. All life history stages are most likely to be encountered in and around breeding sites, which include coastal lagoons, marshes, springs, permanent and semi-permanent natural ponds, and ponded and backwater portions of streams, as well as artificial impoundments such as stock ponds, irrigation ponds, and siltation ponds. Aquatic habitat on the project site is generally unsuitable for resident CRLF for most of the year. The drainages identified in the development footprint are ephemeral and do not contain appropriate deep pools for breeding. The seasonal drainage to the north has suitable habitat seasonally but is dry for part of the year; this feature could be used for dispersal between suitable breeding pools. This drainage is separated from the development footprint by a distance of approximately 1,700 feet, primarily consisting of vineyards, and the southeastern ephemeral drainage connects to the seasonal drainage through over 1,000 feet of culvert, which would inhibit movement up the drainage. Upland habitat in the BSA is generally unsuitable for long term use due to the seasonal lack of moist habitat, although frogs may disperse into the grassland, wetland, oak woodland habitat and drainages during periods of wet weather. CRLF was not observed in the BSA during the 2015 through 2017 biological surveys.
- **Silvery legless lizard (*Anniella pulchra pulchra*)** is a state SSC that is especially common in coastal dune, valley-foothill, chaparral, and coastal scrub types. Within these habitat types, areas with sandy or loose organic soils or where high amounts of leaf litter are favorable. Suitable loose soils are limited in the BSA for this species and as such they would most likely be found under the leaf litter of shrubs and oaks in the oak woodland habitat silvery legless lizard was not observed during the 2015 and 2017 biological surveys.
- **Western pond turtle (*Emys marmorata*) [southern western pond turtle (*Actinemys pallida*)]** is a state SSC that occurs in ponds, marshes, rivers, streams and irrigation ditches that typically support aquatic vegetation. (Note that taxonomy of the locally native pond turtle has been revised several times recently and CDFW has indicated that the species is treated only at the species level, as *Emys marmorata*, while other sources retain the name *Actinemys pallida* (CDFW 2017d). Pond turtles require downed logs, rocks, mats of vegetation, or exposed banks for basking. Pond turtles lay their eggs in nests that are dug along the banks of streams or other uplands in sandy, friable soils. Western pond turtles, especially those that reside in creeks, are known to over winter in upland habitats. Upland movements can be quite extensive and individuals have been recorded nesting or overwintering hundreds of meters from aquatic habitats. The typical nesting season is usually from April through August; however, variation exists depending upon geographic location. Marginally suitable aquatic habitat is present within the ephemeral drainages within the BSA, but would likely be only seasonally. Higher quality habitat is present in the seasonal drainage. Suitable upland habitat is present within the oak woodland grassland habitat. Western pond turtles were not observed in the BSA during the biological surveys.
- **Pallid bat (*Antrozous pallidus*)** is a state SSC that typically occurs in dry habitats such as deserts, grasslands, shrublands and woodlands. Roosting habitat consists of trees, cavities, and rocky areas that are protected from high temperatures. Potential roosting and foraging habitat is present in the oak woodland habitat within the BSA. The nearest CDDDB record of pallid bat in

the San Luis Obispo area is within approximately 5 miles north of the BSA (CNDDB 77). Pallid bat was not observed in the BSA during the 2015 and 2017 biological surveys.

- **American badger (*Taxidea taxus*)** is a state SSC that utilizes a wide variety of scrub, forest and grassland habitats with friable soils. Suitable habitat for this species is present in the grassland, vineyard, and ruderal habitat within the BSA. There are three CNDDB records of badgers within 2.5 miles of the BSA (CNDDB 198, 199, 422). The American badger has the potential to occupy burrows located in the BSA. The project site also provides suitable habitat for badger prey species. However, small mammal burrows are not abundant onsite and available prey base is likely low. American badger was not observed in the BSA during the 2015 and 2017 biological surveys.

These special status animal species have the potential to occur on the habitats present on the project site. Some wildlife species, such as the pallid bat, may be associated with human development where man-made structures serve as proxies for native habitats. Structures on the project site that may be utilized by special status bats or other special status species include sheds, and small outbuildings. The BSA also provides suitable nest habitat for native birds, including migratory birds and raptors. Nest habitat is present in all habitat types, including man-made structures.

g. Sensitive Natural Communities

Nine plant communities occur in the region of the project (Table 17). One sensitive natural community, Valley Needlegrass Grassland, is present on the BSA.

Table 17 Sensitive Natural Communities within 5-miles of the Project Site

Scientific Name / Common Name	Status Fed / State ESA G-Rank / S-Rank CDFW	Potential for Occurrence /Basis for Determination
Central Dune Scrub	--/-- G2 / S2.2	Dune scrub habitat is not present in the BSA.
Central Foredunes	--/-- G1 / S1.2	Foredune habitat is not present in the BSA.
Central Maritime Chaparral	--/-- G2 / S2.2	Chaparral habitat is not present in the BSA.
Coastal and Valley Freshwater Marsh	--/-- G3 / S2.1	Marsh habitat is not present in the BSA.
Coastal Brackish Marsh	--/-- G2 / S2.1	Marsh habitat is not present in the BSA.
Northern Coastal Salt Marsh	--/-- G3 / S3.2	Marsh habitat is not present in the BSA.
Northern Interior Cypress Forest	--/-- G2 / S2.2	Cypress forest is not present within the BSA.
Serpentine Bunchgrass	--/-- G2 / S2.2	Serpentine bunchgrass is not present on the BSA.
Valley Needlegrass Grassland (Purple Needlegrass Grassland)	--/-- G3 / S3.1	Valley needlegrass grassland, characterized by 30% cover of purple needlegrass, is present on the southern portion of the BSA. This community encompasses approximately one quarter of an acre.

Native Trees

The Conservation and Open Space Element includes policies specific to native tree protection. Additionally, the San Luis Obispo County Oak Woodland Ordinance (ordinance) took effect on May 11, 2017. The ordinance protects coast live oak and other native trees from removal and other actions. Any coast live oak or other native trees proposed for removal associated with the project would require mitigation consistent with current County ordinances and policies. The ordinance applies only to the clear-cutting of oak woodland, which would consist of the removal of contiguous trees that occupy an area of one acre or more. The ordinance does not apply to the establishment of residential land uses that otherwise require a ministerial (non-discretionary) land use permit. Residential development may be subject to discretionary approval as required by other standards of this Code (Title 22, Land Use Ordinance) or through an application for a land division pursuant to Title 21, Real Property Division Ordinance, of the County Code.

Native trees are present in the BSA, including coast live oak, bay, and willow trees. Only coast live oak trees are present in the development footprint. No oak trees are currently present within proposed lots, but oaks are present in areas proposed for construction of access roads and crossings. Additionally, the biological report indicated some oak trees were cleared from within and near the footprint of the project while the study was underway. The Althouse and Meade, Inc. report states that between the first and second site visits conducted to prepare the report (March 2 and April 28, 2015, respectively), evidence of scraping with heavy equipment was observed in various lot locations on southern hillsides of the BSA. The report states that work consisted of scraping the top layer of vegetation in future lot areas, pushing soil over banks, and cutting oak trees.

Rincon completed a review of aerial photographs to evaluate this disturbance. The most recent aerial photo available for review is dated April 2, 2015, retrieved through Google Earth historical imagery. This photo falls within the window between the March 2 and April 28, 2015 site visits documented in the Althouse and Meade Inc. report. For comparison, Rincon reviewed previous aerial imagery, including a 2014 NAIP image and a 2013 photo available through Google Earth historical imagery (see Appendix D.2). Rincon identified an area of the 2015 disturbance and some changes in oak tree canopy through the aerial photograph review. Changes in oak canopy show that approximately 25 oak canopies visible in the 2013 image are not present in the 2015 image, though some indication of the former canopy locations are visible on the 2015 photo as differences in vegetation patterns where the oaks once stood. A site overlay indicates that the majority of trees that are absent from the April 2015 photo are not within proposed development areas; rather, 17 of these trees appear to be in a recently cleared area of agricultural expansion, where a barley cover crop was documented in 2017, while eight of the removed trees are in the vicinity of proposed lots and roads. The diameter of the removed trees is not known; however, based on canopy size and leaf density in the August 2013 photo, some of the trees were likely mature oaks, and some were likely senescent. Within the development footprint, oaks are still present along the proposed access road. Additionally, approximately 20 acres of oak woodlands are still present in areas to be retained as open space, as well as in areas identified as potential future vineyard expansion areas, excluding recently cleared areas (Figure 15). Future agricultural activities that affect oak trees would be subject to the County oak ordinance.

Wildlife Corridors

Wildlife movement corridors or habitat linkages are generally occur between non-contiguous habitat communities allowing for the physical and genetic exchange between otherwise isolated

animal populations. Such linkages may provide access routes to potential foraging and denning areas within an animals territory. Linkages also serve as migration and dispersal corridors between habitats and species seeking new territory for establish new populations. Wildlife corridor networks are defined as a group of habitat linkages connecting core populations and habitats. Wildlife movement corridors occur in various scales.

The project site is not located within an Essential Connectivity Area (ECA), mapped in the report California Essential Habitat Connectivity Project: A Strategy for Conserving a Connected California (Spencer et al. 2010). ECAs represent principle connections between Natural Landscape Blocks. The project site includes small-scale movement corridors represented by the ephemeral drainages, grassland, riparian and oak woodland habitats. The riparian corridors observed on the project site may serve as movement corridors between upland and aquatic habitats. Each of these habitats provides small-scale habitat corridors for sensitive and common wildlife to move between habitats on site and to adjacent habitats off site.

Potentially Jurisdictional Wetlands and Waters

All potentially jurisdictional features within the BSA and the project site were inspected to record existing conditions and determine extent of potential U.S. Army Corps of Engineers (USACE), Regional Water Quality Control Board (RWQCB), and CDFW jurisdictions. A summary and map of potentially jurisdictional features observed on the project site is presented in Table 18 and Figure 15. (Note that vegetation classifications presented above in Table 15 are divided into classes slightly differently than potential limits of jurisdiction presented in.) Rincon biologists identified three drainages and five seep and wetland habitats that may be subject to CDFW, RWQCB, and USACE jurisdictions. Formal jurisdictional delineations of waters and wetlands were not completed during the field surveys. Final jurisdictional determinations would be issued by the respective agencies at the time the applicant requests authorization for impacts to water and wetlands, typically during the permitting phase.

Table 18 Potentially Jurisdictional Wetlands and Drainages

Wetland or Stream	Linear Feet	Approximate Acres – to OHWM/ edge of wetland	Approximate Acres – to Top of Bank/ edge of Riparian
Southeastern stream	2,128	0.20	0.97
Southwestern stream	1,844	0.17	0.85
Intermittent Stream and connected tributaries	3,337	1.53	6.04
Wetlands	–	0.90	–

h. Regulatory Setting

The following is a summary of the regulatory context under which biological resources are managed at the federal, state, and local level. Agencies with responsibility for protection of biological resources within the project site include:

- U.S. Fish and Wildlife Service (federally listed species, candidate and proposed species for federal listing, and migratory birds);
- U.S. Army Corps of Engineers (waters of the United States, including wetlands);

- California Department Fish and Wildlife (state listed and fully-protected species, and other special status plants, wildlife and habitats, including streams, rivers, lakes and riparian vegetation);
- Regional Water Quality Control Board (RWQCB; waters of the State); and
- County of San Luis Obispo (special status plants, wildlife, and habitats).

A number of federal and/or State statutes provide a regulatory structure that guides the protection of biological resources. The following discussion provides a summary of those laws that are most relevant to biological resources in the project site.

Federal Agencies

Federal agencies with jurisdiction within the project site include the USFWS and USACE.

UNITED STATES FISH AND WILDLIFE SERVICE

The USFWS implements the Migratory Bird Treaty Act (16 United States Code [USC] Section 703-711) and the Bald and Golden Eagle Protection Act (16 USC Section 668). The Migratory Bird Treaty Act (MBTA) (50 CFR Part 10 and Part 21) protects migratory birds, their occupied nests, and their eggs from disturbance and/or destruction. "Migratory birds" include all nongame, wild birds found in the United States, except for the house sparrow, European starling, and rock pigeon.

The USFWS shares responsibility with NMFS for implementing the Federal Endangered Species Act (FESA) (16 USC § 153 et seq.). The USFWS generally implements the FESA for terrestrial and freshwater species, while the NMFS implements the FESA for marine and anadromous species, which do not occur in the BSA. Projects that would result in take of any federally listed threatened or endangered species are required to obtain permits from the USFWS or NMFS through either Section 7 (interagency consultation with a federal nexus) or Section 10 (Habitat Conservation Plan) of FESA, depending on the involvement by the federal government in permitting and/or funding of the project. The permitting process is used to determine if a project would jeopardize the continued existence of a listed species and what measures would be required to avoid jeopardizing the species.

"Take" under federal definition means to harass, harm (which includes habitat modification), pursue, hunt, shoot, wound, kill, trap, capture, or collect, or to attempt to engage in any such conduct. Proposed or candidate species do not have the full protection of FESA; however, the USFWS and NMFS advise project applicants that they could be elevated to listed status at any time.

U.S. ARMY CORPS OF ENGINEERS

Under Section 404 of the Clean Water Act (CWA) and Section 10 of the Rivers and Harbors Act (RHA), the USACE has authority to regulate activities resulting in the discharge of dredged or fill material into waters of the United States, including wetlands. The USACE administers the federal policy embodied in Executive Order 11990, which, when implemented, is intended to result in no-net-loss of wetland functions, values or area. In achieving the goals of the CWA and RHA, the USACE seeks to avoid adverse impacts and to offset unavoidable adverse impacts on existing aquatic resources. Any fill or adverse modification of waters of the U.S. and/or associated wetlands would require a permit from the USACE prior to the start of work. Typically, permits issued by the USACE include as a condition of the project prescribed mitigation to offset unavoidable impacts to wetlands in a manner that achieves the goal of no-net-loss of wetlands.

State Agencies

State agencies with jurisdiction within the project site include the RWQCB and CDFW.

REGIONAL WATER QUALITY CONTROL BOARD

The SWRCB and the local Central Coast RWQCB have jurisdiction over "waters of the State," pursuant to the Porter-Cologne Water Quality Control Act, which are defined as any surface water or groundwater, including saline waters, within the boundaries of the State. The SWRCB has issued general Waste Discharge Requirements 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 Central Coast RWQCB enforces actions under this general order for isolated waters not subject to Federal jurisdiction. The RWQCB is also responsible for the issuance of water quality certifications pursuant to Section 401 of the Clean Water Act for actions impacting waters subject to Federal jurisdiction.

CALIFORNIA DEPARTMENT OF FISH AND WILDLIFE

The CDFW derives its authority from the Fish and Game Code of California. The California Endangered Species Act (CESA; Fish and Game Code Section 2050 et seq.) prohibits take of state listed as threatened or endangered species. Take under CESA is restricted to the direct killing of a listed species and does not prohibit indirect harm by way of habitat modification.

California Fish and Game Code Sections 3503, 3503.5, and 3511 describe unlawful take, possession, or needless 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 Code protects all birds-of-prey and their eggs and nests against take, possession, or destruction of nests or eggs.

Species of Special Concern (SSC) is a category used by the CDFW for those species that are considered to be indicators of regional habitat changes or are considered to be at risk of decline such that future listing may be necessary. SSCs do not have any special legal status except that which may be afforded by the Fish and Game Code as noted above. The SSC category is intended by the CDFW for use as a management tool to include these species into special consideration when decisions are made concerning the development of natural lands.

The CDFW also has authority to administer the Native Plant Protection Act (NPPA) (Fish and Game Code Section 1900 et seq.). The NPPA requires the CDFW to establish criteria for determining if a species, subspecies, or variety of native plant is endangered or rare. Under Section 1913(c) of the NPPA, the owner of land where a rare or endangered native plant is growing is required to notify the department at least 10 days in advance of changing the land use to allow for salvage of plant. In some circumstances, CDFW may require an Incidental Take Permit for impacts to rare or endangered plants.

Lakes, streams and associated riparian vegetation fall under the jurisdiction of the CDFW. Section 1600 et seq. of the Fish and Game Code (Lake and Streambed Alteration Agreements) gives the CDFW regulatory authority over work within the stream zone consisting of, but not limited to, substantial alteration, diversion or obstruction of the natural flow, or changes in the channel, bed, or bank of any river, stream or lake.

County of San Luis Obispo

The County's General Plan Conservation and Open Space Element outlines goals and policies that aim to preserve biodiversity, sustain healthy ecosystems, enhance degraded habitats, and protect the diverse landscapes throughout the County. Major goals include protecting special status species, protecting and enhancing native habitat, preserving wetlands and aquatic habitats (including fisheries and marine resources).

Policies regarding tree protection include:

- **Policy BR 3.1 Native Tree Protection.** Protect native and biologically valuable trees, oak woodlands, trees with historical significance, and forest habitats to the maximum extent feasible.
- **Policy BR 3.2 Protection of Native Trees in New Development.** Require proposed discretionary development and land divisions to avoid damage to native trees (e.g., Monterey Pines, oaks) through setbacks, clustering, or other appropriate measures. When avoidance is not feasible, require mitigation measures.

Additionally, the San Luis Obispo County Oak Woodland Ordinance (ordinance) took effect on May 11, 2017. The San Luis Obispo County Tree Ordinance protects coast live oak and other native trees from removal and other actions. Any coast live oak or other native trees proposed for removal associated with the project would require mitigation consistent with current County ordinances and policies.

The ordinance applies only to the clear-cutting of oak woodland, which would consist of the removal of contiguous trees that occupy an area of one acre or more. Oak woodland is defined as a group of trees occupying an acre or more with a reasonably uniform composition that is dominated by one or more of the following species: blue oak (*Quercus douglasii*), coast live oak, interior live oak (*Quercus wislizeni*), valley oak (*Quercus lobata*), and California black oak (*Quercus kelloggii*). The ordinance does not apply for the removal of individual oak trees except for Heritage oaks (any individual oak species, as defined by the ordinance, of 48 inches diameter at breast height (dbh) or greater, separated from all stands and Oak Woodlands by at least 500 feet). Further, the ordinance does not apply to woodland thinning, tree trimming, or oak trees that are diseased, dead or creating a hazardous condition. The Ordinance would not apply to individual tree impacts associated with the proposed access road, but could apply to future agricultural activities on the property.

4.4.2 Impact Analysis

a. Methodology and Significance Thresholds

This impact analysis is based field surveys and reports prepared by Althouse and Meade (2016), Rincon (2017a), and review of aerial photography, topographic maps, and available literature regarding the existing biological resources within the project site.

Development impacts are assessed based on information provided within the preliminary site plan, which include the size and location of proposed lots and building envelopes, locations of access roads and LID features including stormwater basins, and potential agricultural expansion areas (refer to Section 2.0, Project Description). These project components were used to determine the area of disturbance to vegetative communities and associated species.

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 plant 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 *State 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 *State CEQA Guidelines*. Impacts would be significant if the Jack Ranch SLO Agricultural Cluster Project would result in any of the following:

1) 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 USFWS;
2) 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 USFWS;
3) 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;
4) 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;
5) Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance; or
6) Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan.

As explained in detail in the Initial Study (Appendix A), implementation of the project would not conflict with an adopted habitat conservation and/or natural community conservation plan (Threshold 6). Therefore, no further discussion of this impact is included in this section. Impacts relating to thresholds 1 through 5 are discussed below.

b. Project Impacts

Threshold:	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?

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.

Results of CNDDB, USFWS, Ebird, and CNPS database queries, the biological report, and reconnaissance-level survey identified several special status species and the presence of one sensitive plant community with the potential to occur on the proposed development footprint.

Direct impacts to special status species include injury or mortality occurring during implementation of the project. Direct impacts also include habitat modification and loss that results in mortality or otherwise alters the foraging and breeding behavior substantially enough to cause injury. Indirect impacts could occur due to 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, thereby reducing the availability of suitable forage and breeding sites for special status animal species. Indirect impacts such as disturbance could also result due to increased access by humans and domestic animals, particularly in areas where trails may be planned. Additionally, increased human and domestic animal (particularly dogs) presence foster the spread of non-native invasive plant species and disrupt the normal behaviors of animal species.

Special Status Plants

The project would impact annual grassland habitat. Ample annual grassland is available in the preserved areas of the BSA and the surrounding region, and a portion of the annual grassland in open space would be preserved in perpetuity, including annual grassland habitat. However, annual grassland is potentially suitable for special status plants as outlined in Table 16. Although seasonally timed surveys were negative for special status plants, the biological report acknowledges that drought conditions may have hampered detection of one special status annual, San Luis Obispo owl's clover. Construction of the project potentially could impact San Luis Obispo owl's clover should it be present within the development footprint. Direct impacts could occur as a result of removal of plants, or disturbance or fragmentation of habitat through grading and other ground disturbance. Additionally, several populations of special status plants are known from within less than a mile of the BSA. Indirect impacts to special status plant populations could occur through introduction and spread of non-native invasive species, as well as temporary effects from dust resulting from grading activities that can cause reduced efficiency of photosynthesis.

CRPR 1B plant species meet CEQA Section 15380 criteria as rare, and impacts could be significant without compensatory mitigation. Mitigation is required for all impacts over 10 percent of the population within the BSA to avoid impacts that could cause the regional population of any of these species to drop below self-sustaining levels, threaten to eliminate any plant community of which the species was a key part; or substantially reduce the number of occurrences or individuals or restrict the range of that species.

Cambria morning-glory, a CRPR 4.2, was confirmed in patches throughout the BSA. This species is now known to be more common than originally thought. The project would remove a portion of the individuals onsite, but is not expected to result in a substantial reduction in population numbers or occupied habitat.

Impacts to Special Status Plants would be considered a Class II, significant but mitigable, impact.

Special Status Wildlife and Nesting Birds

Impacts to annual grassland habitat, oak trees and drainages have the potential to impact wildlife species using these habitats for cover, forage, movement and nesting, including special status wildlife and nesting birds. Impacts to wildlife are related to construction noise and human presence. Specific impacts include the disruption of patterns of habitat use, displacement of individuals, disruption of breeding habits, disruption of wildlife movements, and night lighting.

The vegetation changes associated with project development would reduce the acreage of natural vegetation by approximately 15 acres. In addition to the direct loss of habitat, project development could result in increased mortality to species that continue to utilize open spaces immediately adjacent to the project site after development due to domestic and feral animal predation and collecting, as well as attrition of important prey resources for wildlife in the remaining habitat. A wide variety of wildlife species could be adversely affected by the presence of lights from the proposed development. Nocturnal species that rely on darkness to hunt or evade predators would be targeted, including owls, nighthawks and rodents. Conversely, certain species of aerial-foraging bats may be helped by night lighting because of their attractiveness to prey items such as flying insects.

Special Status Birds

Development of the project site will remove potential migratory bird and raptor foraging/nesting habitat areas from approximately 15 acres of the site.

White-tailed Kite, Burrowing Owl, and Other Raptors

Direct impacts to this species and other raptors may occur due to removal of trees and shrubs that may contain active nests. White tailed kites were not observed on the BSA during field surveys. Red-tailed hawks were observed nesting in the oak trees between lots 10 and 11. The nest trees would not be removed based on project design. However, construction within the project site may result in direct impacts, including displacement of prey species and loss of approximately 15 acres of foraging habitat, and disturbances to nests such that normal foraging, sheltering, or nesting behaviors are altered, potentially resulting in abandonment of nests. Construction noise and activity may alter foraging behaviors and reduce reproductive success, increase competition between territories, or contribute to abandonment of territories or nests if available foraging habitat in the region proved limiting.

Among raptors, burrowing owls are particularly susceptible to ground disturbance. This species was not observed on the BSA during field surveys, but, should it occur in the project area during construction, direct impacts to burrowing owls could include mortality, injury, destruction of burrows, and loss of suitable foraging habitat. The project site provides suitable wintering habitat. Construction activities could collapse occupied burrows resulting in injury or mortality and/or result in nest abandonment.

Indirect impacts from construction activities could occur from noise and increased activities if a burrow or nest is present in close proximity to construction. Construction related noise can disrupt the behavior of nesting adults and therefore can indirectly lead to the failure of the nest. In addition, increased human activity could attract predators, such as coyotes and ravens, through leaving of trash (especially food trash). Predators such as coyotes and ravens can cause a nest to fail by predating upon eggs or young

Loggerhead Shrike and Other Nesting Birds

Direct impacts to loggerhead shrike and other nesting birds could occur during grading and construction activities if conducted during the breeding season (typically February-August) due to removal of trees, shrubs, and herbaceous vegetation that may contain active nests. Active nests could be removed, trampled, or crushed by construction and use of access roads during construction. In addition, the noise, vibration, and movement of construction equipment and personnel in close proximity to the active nests of these species could cause adults to abandon eggs or young. Disturbance caused by construction activities could also result in the loss of foraging habitat, and the disruption of normal foraging and nesting behavior leading to reduced reproductive success and possibly nest abandonment.

Indirect impacts from construction activities could occur from noise and increased activities if a nest is present in close proximity to construction. Construction related noise can disrupt the behavior of nesting adults and therefore can indirectly lead to the failure of the nest. In addition, increased human activity could attract predators, such as coyotes and ravens, through leaving of trash (especially food trash). Predators such as coyotes and ravens can cause a nest to fail by preying upon eggs or young.

Construction activities and related noise would also impact foraging migratory birds by removing approximately 15 acres of foraging habitat. With consideration for the open space area to be retained adjacent to the development footprint, potential effects on foraging birds would be less than significant.

Pallid Bat / Bat Roosts

Potential direct impacts to pallid bats within the BSA include removal of potential roosting habitat, injury or mortality if bats are roosting within the development footprint. If present, removal of maternal colonies of bats would be potentially significant.

The project would also result in conversion of approximately 15 acres of foraging habitat to residential uses. With consideration for the open space area to be retained adjacent to the development footprint, potential effects on foraging bats would be less than significant.

American Badger

Direct impacts to American badger could include mortality, den destruction, injury, displacement, and harassment, along with permanent conversion of suitable habitat. During construction, destruction of American badger dens (including natal dens), if present, could occur during clearing and grubbing, grading, or other earthwork-like activities. Dens could also be collapsed by vehicles or equipment driving over them. In addition, injury or mortality could occur as a result of collisions with vehicles or construction equipment, entrapment in trenches and excavations, or exposure to spilled or leaked industrial chemicals, fuels, and lubricants.

Indirect impacts to badgers could include changes in behavior due to increased human activity and noise that could be detrimental to individuals if the behavioral changes are to such an extent that the animals would not be able to effectively forage, thereby affecting survival and reproductive success. In addition, increased human activity could attract competitors, such as coyotes, through leaving of trash, especially food trash.

Silvery Legless Lizard

Potential direct impacts to silvery legless lizard include injury or mortality of individuals during ground disturbing activities in areas of suitable habitat, particularly under oak canopy or in sandy soils. The majority of these habitats in the BSA are outside the development footprint, thus the project is anticipated to have a less than significant effect on this species.

California Red-legged Frog

Although suitable breeding habitat is not present in the development footprint, California red-legged frog could utilize drainages and seep wetlands as dispersal habitat. Drainages within the development footprint are ephemeral and lack suitable pools for breeding; the development footprint is separated from the intermittent drainage that contains emergent vegetation cover and seasonal water by existing vineyards. California red-legged frog would only be expected to occur in disturbance areas incidentally, if at all, during periods of overland movement occurring during or immediately after rainstorms and during dispersal periods, due to lack of perennial aquatic habitat and suitable breeding habitat. Potential impacts to this species would occur if individuals were present during construction and were exposed to vehicle and heavy equipment traffic.

Potential direct impacts to California red-legged frog individuals include harassment or injury if they are present within the project area during implementation. Direct permanent impacts to habitat that could be used by California red-legged frog are expected to occur at the proposed drainage crossing, and through impacts to seep wetlands. Indirect impacts to California red-legged frog could result from general project-related disturbance and noise if individuals are foraging or aestivating within the intermittent stream downslope of the development footprint within the BSA. Indirect impacts may also occur as a result of water quality impacts associated with the construction, as the drainage onsite are hydrologically connected to a watershed known to support this species.

Western Pond Turtle

Potential direct impacts to western pond turtle individuals include harassment, injury or mortality if they are present within the project area during construction activities. Direct permanent impacts to aquatic habitat could occur as a result of the construction associated with the stream crossing. Indirect impacts may occur as a result of water quality impacts associated with the construction.

Impacts to Special Status Wildlife and nesting birds would be considered a Class II, *significant but mitigable* impact.

Mitigation Measures

The following mitigation measures would be required to reduce potential impacts of the project to special status plant and animal species.

BIO-1

(a) 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. The form shall be submitted to the County Department of Planning and Building to document compliance prior to initiation of construction.

(b) Special Status Plant Species Avoidance and Minimization Measures. Prior to initial ground disturbance and staging activities in areas of suitable habitat for San Luis Obispo owl's clover and Cambria morning glory, seasonally timed focused surveys shall be completed to confirm results of the prior botanical survey. The surveys shall be floristic in nature and shall be seasonally-timed to coincide with the blooming period of the target species, and shall occur in a year with at least 80 percent of typical rainfall, or during which reference site visits confirm the species can be detected. All plant surveys shall be conducted by a qualified biologist approved by the implementing agency. All special status plant species identified on-site shall be mapped onto a site-specific aerial photograph and topographic map. Surveys shall be conducted in accordance with the most current protocols established by the CDFW, USFWS, and consistent with the County's policies. Survey results shall be submitted to the County Department of Planning and Building prior to initiation of construction.

If special-status plant species, specifically, San Luis Obispo owl's clover or Cambria morning glory, are identified within the proposed development footprint, the County Department of Planning and Building will be notified, and an analysis shall be conducted to determine if project impacts would affect more than 10 percent of the population within the BSA. Where direct impacts to special status plants cannot be avoided through redesign of project elements, to compensate for significant impacts on special status plant species, offsite habitat occupied by the affected species shall be preserved and managed in perpetuity at a minimum 1:1 mitigation ratio (at least one plant preserved for each plant affected, and also at least one occupied acre preserved for each occupied acre affected) up to the significance threshold. The threshold is more than 10 percent of the BSA population for CRPR 1B species, and a mitigation and monitoring program will be required. Avoidance of special-status plant occurrences will be the primary mitigation measure. Where direct impacts to special status plants cannot be avoided, to compensate for significant impacts on special status plant species, onsite salvage and restoration shall occur, or offsite habitat occupied by the affected species shall be preserved and managed in perpetuity at a minimum 1:1 mitigation ratio (at least one plant preserved or restored for each plant affected, and also at least one occupied acre preserved or restored for each occupied acre affected).

If onsite restoration is selected, then a salvage and relocation program to preserve open space areas on site containing appropriate habitat will be implemented to ensure the long-term survivability of the species. A special status plant mitigation restoration plan will be prepared, if needed, to identify suitable locations, methods, and success criteria for special status plant

mitigation through direct seeding and restoration of suitable unoccupied habitat. The plan shall, at a minimum, require replacement through collection of seed and topsoil from impact sites, a monitoring and management component that outlines weed management and monitoring techniques, and success criteria that require successful establishment of the target species over the acreage and numbers of impacted plants within five years. Annual monitoring for at least five years shall be incorporated into the program. The plan shall be submitted to the County Department of Planning and Building for approval prior to issuance of grading permits. Implementation of the plan shall be underway prior to final sign off. Annual reports shall be submitted to the County Department of Planning and Building until success criteria are met.

If offsite preservation is selected, areas proposed for preservation and serving as compensatory mitigation for special status plant impacts shall contain verified extant populations of the special status plant species, of similar size and quality, and equal or greater density to the populations that would be impacted by the Project. Preservation of offsite local populations would ensure that although the project could impact some individuals of CRPR 1B, the project would not result in extirpation of these species from the region, and conserved populations would benefit long-term survival of these species statewide. Because populations of annual plants can fluctuate from year to year and are difficult to census over large areas, estimated population of the target species at mitigation sites may vary by up to 10 percent from impacted population estimates, provided calculations are based on population estimates conducted following 2009 CDFW-approved botanical survey protocol. The technical report shall identify a species-by-species accounting of individuals and acreage impacted; locations, acreages, and individuals at each proposed mitigation site; botanical survey dates, personnel, mapping and population estimation techniques used to demonstrate site suitability as mitigation for special status plant impacts. The report shall be submitted to the County Department of Planning and Building prior to issuance of grading permits. Documentation that the preservation effort is complete shall be submitted to the County Department of Planning and Building prior to final sign off.

(c) Native Landscaping. In order to ensure that project landscaping does not introduce invasive non-native plant species, landscaping materials shall not include non-native invasive species. Drought tolerant, locally native plant species shall be incorporated into landscaping plans. Noxious, invasive, non-native plant species that are recognized on the Federal Noxious Weed List, California Noxious Weeds List, and/or California Invasive Plant Council Inventory shall not be permitted. Prior to installing vegetation and landscaping in common areas such as stormwater basins and LID systems, a landscape plan shall be submitted to the County Department of Planning and Building identifying the plant palettes, including seed mixes, to be used and specifying the prohibition against using invasive species. Prior to buildout of each lot, a plant palette outlining materials proposed for use shall be submitted to the County Department of Planning and Building for approval, prior to issuance of building permits. The plant palette for lot buildout shall include a statement specifying the prohibition against using invasive species.

(d) Preconstruction Surveys for Nesting Raptors and Birds. The applicant shall ensure the following actions are undertaken to avoid and minimize potential impacts to nesting birds:

To the extent feasible, removal of vegetation within suitable nesting bird habitats will be scheduled to occur in the fall and winter, outside the typical nesting season (typically February through August).

For activities that cannot avoid nesting season, not more than 30 days prior to initiation of construction activities (e.g. mobilization, staging, and Environmentally Sensitive Area (ESA) fence installation) during the breeding season (February 15 to August 31), a qualified biologist shall conduct preconstruction surveys for nesting raptors and other native nesting birds. The survey for the presence of nesting raptors shall cover all areas within the disturbance footprint plus a 500-foot buffer where access can be secured. The survey area for all other nesting bird species shall include the disturbance footprint plus a 300-foot buffer. The surveys shall be repeated during the breeding season for each subsequent year of construction to ensure that ongoing construction activities avoid impacts to nesting birds. Survey reports shall be submitted to the County Department of Planning and Building at least one week prior to initiating construction, and within one week of completing surveys for ongoing activities.

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, and 500 feet for nests of fully protected species (such as white-tailed kite) and raptors. 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. A qualified biologist shall confirm that breeding/nesting is completed and young have fledged the nest prior to removal of the buffer. Encroachment into the buffer shall be conducted at the discretion of the qualified biologist. Nests of fully protected species shall not be removed at any time, even when inactive. Monitoring reports summarizing nest avoidance measures, including buffers, fledge dates, and documentation of the avoidance of fully protected species, if applicable, shall be submitted to the County Department of Planning and Building on a monthly basis while nest buffers are in place or while activities are occurring within the specified buffer of an inactive nest of a fully protected species.

(e) Burrowing Owl Avoidance and Minimization. No more than 30 days before the start of initial ground disturbing activities, a qualified biologist(s) shall conduct focused, pre-construction, take-avoidance surveys for burrowing owls within all areas proposed for ground disturbance that contain suitable owl habitat (CDFW 2012). Preconstruction surveys shall be consistent with CDFW-recommended methods described in the Staff Report on Burrowing Owl Mitigation (CDFW 2012), and be conducted on foot such that 100% of the survey area is visible, and shall cover the entire limits of disturbances plus a 500-foot buffer. If the project is developed in phases, the preconstruction surveys shall be timed to coincide with the start of each phase, rather than the entire site being surveyed at one time. All observations of burrowing owl and sign of burrowing owl (including suitable burrows, pellets, whitewash) shall be mapped on a site-specific aerial image. A report of the survey finds shall be submitted to the County Department of Planning and Building prior to initiation of construction activities.

If no suitable burrows are found, a final take avoidance survey shall be completed within 48 hours prior to initiation of ground disturbing activities. If suitable burrows for burrowing owls are found during preconstruction surveys on the project site; burrowing owl occupancy shall be determined through up to three additional focused surveys on potential burrows during the morning and/or evening survey windows as defined in the Staff Report on Burrowing Owl Mitigation (CDFW 2012). If the burrows are determined to be unoccupied, they shall be hand excavated by a qualified biologist.

If the presence of burrowing owls is confirmed, the following avoidance measures shall be implemented.

1. Occupied burrows shall not be disturbed during the nesting season (typically February through August) unless a qualified biologist verifies, through noninvasive methods, that either (1) the burrow is not being used for breeding, (2) a previously active nest has failed and the burrow is no longer active, or (3) all juveniles from the occupied burrow are foraging independently and capable of independent survival and the burrow is no longer an active nest burrow. Owls present after February 1 shall be assumed to be nesting unless evidence indicates otherwise. Nest-protection buffers described below shall remain in effect until August 31 or, based upon monitoring evidence, until the nest has failed or all juvenile owls are foraging independently as determined by a qualified biologist.
2. Site-specific, no-disturbance buffer zones shall be established and maintained between project activities and occupied burrows, using the distances recommended in the CDFW guidelines (CDFW 2012). Refer to Table 19 for these site-specific no-disturbance buffer zones.

Table 19 Site-Specific No-Disturbance Buffer Zones

	Level of Disturbance		
Time of Year	Low (meters)	Med (meters)	High (meters)
April 1 – August 15	200	500	500
August 16 – October 15	200	200	500
October 16 – March 31	50	100	500

The appropriateness of using reduced buffer distances or burrow-specific buffer distances shall be established on a case-by-case basis by a qualified biologist in consultation with CDFW, and shall depend on existing conditions (e.g., vegetation/topographic screening and current disturbance regimes). If necessary, buffer distances shall be carefully reassessed and relaxed or modified, based on future development plans (e.g., increased or intensified construction activities), by a qualified biologist who may consult with CDFW. The buffer zones shall be clearly delineated by highly visible orange construction fencing, which shall be maintained in good condition through construction of project or until construction activities are no longer occurring in the vicinity of the burrow.

3. During the nonbreeding season (generally September 1– January 31), a qualified biologist may passively relocate burrowing owls found within construction areas. Prior to passively relocating burrowing owls, a Burrowing Owl Exclusion Plan shall be prepared by a qualified biologist in accordance with Appendix E of the *Staff Report on Burrowing Owl Mitigation* (CDFW 2012). The Burrowing Owl Exclusion Plan shall be submitted for review and approval to the CDFW and County Department of Planning and Building prior to implementation.

The biologist shall accomplish such relocations using one-way burrow doors installed and left in place for at least two nights; owls exiting their burrows will not be able to re-enter. Then, immediately before the start of construction activities, the biologists shall remove all doors and excavate the burrows to ensure that no animals are present the burrow. The excavated burrows shall then be backfilled. To prevent evicted owls from occupying other burrows in the impact area, the biologist shall, before eviction occurs, (1) install one-way doors and backfill all

potentially suitable burrows within the impact area, and (2) install one-way doors in all suitable burrows located within approximately 50 feet of the active burrow, then remove them once the displaced owls have settled elsewhere. When temporary or permanent burrow-exclusion methods are implemented, the following steps shall be taken:

a) Prior to excavation, a qualified biologist shall verify that evicted owls have access to multiple, unoccupied, alternative burrows, located nearby (within 250 feet) and outside of the projected disturbance zone. If no suitable alternative natural burrows are available for the owls, then, for each owl that is evicted, at least two artificial burrows shall be installed in suitable nearby habitat areas. Installation of any required artificial burrows preferably shall occur at least two to three weeks before the relevant evictions occur, to give the owls time to become familiar with the new burrow locations before being evicted. The artificial burrow design and installation shall be as described in the Example Components for Burrowing Owl Artificial Burrow and Exclusion Plans per Appendix E of the *Staff Report on Burrowing Owl Mitigation* (CDFW 2012).

b) Passive relocation of burrowing owls shall be limited in areas adjacent to project activities that have a sustained or low-level disturbance regime; this approach shall allow burrowing owls that are tolerant of project activities to occupy quality, suitable nesting and refuge burrows. The use of passive relocation techniques in a given area shall be determined by a qualified biologist who may consult with CDFW, and shall depend on existing and future conditions (e.g., time of year, vegetation/topographic screening, and disturbance regimes). Because the project incorporates retention of open space immediately adjacent to the project footprint, no compensatory mitigation for habitat loss is required for this site.

(f) Pallid Bat and Bat Roost Avoidance. A qualified biologist shall conduct a survey before any grading or removal of trees, particularly trees 12 inches in diameter or greater at 4.5 feet above grade with loose bark or other cavities within 48 hours prior to removal of trees. If no active roosts are found, no further action shall be required. A survey report summarizing results of the survey shall be submitted to the County Department of Planning and Building within one week of completing surveys.

If active maternity roosts or hibernacula are found, the structure or tree occupied by the roost shall be fully avoided and not removed or otherwise impacted by project activities during the maternity season. A minimum 100-foot ESA avoidance buffer shall be demarcated by highly visible orange construction fencing around active maternity roosts. No construction equipment, vehicles, or personnel shall enter the ESA without clear permission from the qualified biologist. ESA fencing shall be maintained in good condition for the duration of the maternity season. The roost shall be removed only after the maternity season has ended, and shall be removed under the direction of a qualified biologist.

If active non-maternity bat roosts (e.g., day roosts, hibernacula) are found in trees scheduled to be removed, the individuals shall be safely evicted (e.g., through installation of one-way doors) under the direction of a qualified bat biologist in consultation with the CDFW. In situations requiring one-way doors, a minimum of one week shall pass after doors are installed to allow all bats to leave the roost. Temperatures need to be sufficiently warm for bats to exit the roost, because bats do not typically leave their roost daily during winter months in coastal California. Eviction shall be scheduled to allow bats to leave during nighttime hours, thus increasing their chance of finding new roosts with a minimum of potential predation during daylight.

(g) American Badger Avoidance and Minimization. The mitigation measures below are recommended to determine whether badgers are present in the area and to prevent badgers from becoming trapped in burrows during construction activities.

1. A pre-construction survey for active badger dens shall be conducted by a County qualified biologist within 30 days of initial ground disturbance activities. The survey shall cover the entire area proposed for development plus a 50-foot buffer. Surveys shall focus on both old and new den sites. A survey report summarizing results of the survey shall be submitted to the County Department of Planning and Building within one week of completing survey.
2. In order to avoid the potential direct take of adults and nursing young, no grading shall occur within 50 feet of an active badger den, as determined by a qualified biologist, between March 1 and June 30. Activity status between March 1 and June 30 may be monitored through the use of wildlife cameras. Fiber optic scopes shall not be used during the season in which young may be present in dens.
3. Construction activities during July 1 and March 1 shall comply with the following measures to avoid direct take of adult and weaned juvenile badgers.

    a) Status of dens shall be established through observation of den use. If dens are too long to see the end, a fiber optic scope or other acceptable method, such as multiple nights of documentation with a wildlife camera, shall be used to assess the presence of badgers. Inactive dens shall be excavated by hand with a shovel to prevent badgers from re-using them during construction.

    b) Passive relocation shall be used to evict animals from active burrows to prevent direct mortality or injury. Although displaced animals may compete with other badgers in the surrounding area, given the relatively small size of the development footprint compared with surrounding retained open space there is available habitat for displaced individuals. Badgers shall be discouraged from using currently active dens prior to the grading of the site by partially blocking the entrance of the den with sticks, debris and soil for 3 to 5 days. Access to the den shall be incrementally blocked to a greater degree over this period. Alternatively a one-way door in conjunction with daily monitoring and wildlife cameras may be used. After badgers have stopped using active dens within the project boundary, the dens shall be hand-excavated with a shovel to prevent re-use.

    c) A qualified biologist shall be present during the initial clearing and grading activity. If badger dens are found, all work shall cease until the biologist can safely close the badger den. Once the badger dens have been closed, work on the site may resume.

(h) Silvery Legless Lizard Avoidance and Minimization. Within 30 days prior to initiation of ground disturbance areas in sandy soils and areas of oak canopy within the impact footprint, a qualified biologist shall conduct a raking survey to search for legless lizards. Any individuals found shall be relocated to appropriate habitat at least 50 feet outside the development footprint. A survey report summarizing results of the survey shall be submitted to the County Department of Planning and Building within one week of completing survey. A qualified biologist shall monitor initial vegetation clearing and ground disturbance in areas of suitable habitat, primarily associated with oak canopy near the drainage crossing, to salvage and relocate individuals. A monitoring report summarizing results of the monitoring shall be submitted to the County Department of Planning and Building within one week of completing monitoring work for this species.

(i) California Red-legged Frog Avoidance and Minimization. The applicant shall ensure the following actions are implemented to avoid and minimize potential impacts to California red-legged frog (CRLF):

- Activities associated with the drainage crossing and any impacts to wetlands shall occur during the dry season when no water is present in the southeastern drainage.
- A pre-construction survey of the proposed disturbance footprint for CLRF shall be conducted by a qualified biologist within 48 hours prior to the start of all project activities associated with the drainage crossing or that have potential to impact wetlands and seeps, including ESA fencing installation, to confirm this species is not present in the work area. A report documenting results of the survey shall be provided to the County Department of Planning and Building. ESA fencing installation shall count as the start of construction for purposes of survey timing.
- A biological monitor familiar with CRLF will monitor all initial site disturbance within 200 feet of the drainage, including vegetation removal, initial grading, and ESA fence installation. The monitor(s) shall be approved by the County Department of Planning and Building prior to working on the project.
- In the event the pre-construction survey or the onsite monitor identifies the presence of individuals of CRLF prior to or during construction, then the applicant shall stop work until the CRLF leave the site of their own accord. If CRLF do not move off site on their own, the applicant shall comply with all relevant requirements of the federal Endangered Species Act prior to resuming project activities as follows:
  - Prior to the initiation of any other protective measures, a qualified biologist (i.e., biologist approved by USFWS to translocate CRLF shall, in consultation with USFWS as applicable, identify appropriate relocation sites for CRLF that may be observed during the pre-construction survey or monitoring activities described below and need to be moved from within the limits of direct impact disturbance.
  - Relocation or other take (e.g. entrapment) of CRLF can only be conducted by an authorized biologist and the project applicant must have been issued the requisite take authorizations from USFWS before any relocation activity can commence.
  - If the USFWS does not authorize the relocation of CRLF occurring within the project site, CRLF found within the project site shall be avoided with a 100-foot buffer and no activities shall occur within that buffer until the CRLF has left the project site on its own.
- Impacts to drainage and wetland habitats with potential to support CRLF shall be fully offset (see Mitigation Measure BIO-2).

(j) Western Pond Turtle Avoidance and Minimization. The applicant shall ensure the following actions are implemented to avoid and minimize potential impacts to western pond turtle:

- A pre-construction survey of the proposed disturbance footprint for western pond turtle shall be conducted by a qualified biologist within 48 hours prior to the start of project construction associated with the drainage crossing, including ESA fencing installation, to confirm this species is not present in the work area. A report documenting results of the survey shall be provided to the County Department of Planning and Building. ESA fencing installation shall count as the start of construction for purposes of survey timing.

- A biological monitor familiar with semi-aquatic species that have potential to occur will monitor all initial site disturbance associated with the drainage crossing, including vegetation removal and ESA fence installation. The monitor(s) shall be approved by the County Department of Planning and Building prior to working on the project. If western pond turtles are found, the monitor will halt work until the individual can be moved to a safe location outside the work area, in an area of suitable habitat.
- Access routes, staging, and construction areas shall be limited to the minimum area necessary to achieve the project goal and minimize potential impacts to western pond turtle habitat, including locating access routes and construction staging areas outside of wetlands and riparian areas to the maximum extent practicable.

(k) Night Lighting Standards. The following standards pertaining to night lighting shall be added to the project's design guidelines and submitted to the County Department of Planning and Building for approval prior to issuance of building permits:

Night lighting of public areas shall be kept to the minimum necessary for safety purposes:

- Exterior lighting within 100 feet of open space shall be shielded and aimed as needed to avoid spillover into open space areas. Decorative lighting shall be low intensity.
- Use of high-intensity floodlights on residential lots shall be restricted and all residential lighting shall be shielded.
- Street lighting shall be minimized except as needed at intersections for safety purposes.

Significance After Mitigation

Compliance with Mitigation Measure BIO-1 and all applicable federal, state, and local regulations would reduce impacts to special status plant and animal species to a *less than significant* level.

Threshold:	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?

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.

Streams

Construction of the drainage crossing structure within the southeastern drainage would result in temporary and permanent impacts to the ephemeral stream, including overhanging coast live oak canopy. Construction could result in temporary adverse effects to downstream water quality, including conditions in the intermittent tributary to Davenport Creek and several unnamed drainages, both on-site and downstream from the project site. In addition to the potential for increased erosion and sedimentation during construction, other potential risk comes from the following sources: (a) fuels, hydraulic fluids, paints, solvents, and other chemicals; (b) roadways that would become point sources for runoff into nearby creeks; and (c) additional pesticides, fertilizers, and herbicides could be introduced onto the site.

Because of the sensitivity of stream habitats, as well as the connection to downstream receptors, the permanent impact to the southeastern ephemeral drainage at the crossing site, as well as potential downstream effects resulting from sediments, fuels, oils, solvents, pesticides, fertilizers, and herbicides, would be potentially significant impacts. Refer also to Section 4.12, *Wastewater*, and Section 4.13, *Water and Hydrology*, of this EIR for further discussion of impacts and mitigation specifically related to water quality.

Sensitive Natural Communities

Purple needlegrass grassland is present in the BSA, outside the development footprint. Direct impacts to purple needlegrass grassland are not anticipated. However, indirect impacts could occur through the introduction and spread of invasive non-native species during construction activities.

Mitigation Measures

The following mitigation measures would be required to reduce potential impacts to sensitive habitats on the project site.

BIO-2

(a) Construction Best Management Practices. The applicant shall ensure the following general Best Management Practices (BMPs) are implemented for construction activity within the project site:

- Prior to construction, Environmentally Sensitive Areas (ESAs), including wetlands and drainages that are to be preserved, shall be delineated and fenced off to ensure equipment does not enter and to confine access routes and construction areas to the minimum area necessary to construct the project.
- Appropriate erosion and sediment control measures shall be implemented to ensure soil and sediment are contained on site and are not allowed to run off into the drainage channels or any wetlands to be preserved. Measures may include fiber rolls, mulches, and placement of silt fence in conjunction with ESA fencing where appropriate.
- To the extent feasible, initial ground disturbance and placement of ESA fencing shall be conducted during the dry season, or during periods of no rain in which the site is dry.
- If trenches or other excavations more than 12 inches deep are not closed nightly, then adequate means of escape shall be provided (i.e. earthen ramps not more than 2:1 slope, wooden boards, etc.). Trenches shall be inspected daily for wildlife and shall be inspected immediately prior to backfilling. Any wildlife within trenches shall be freed and allowed to move out of the project area.
- All vehicle maintenance/fueling/staging shall occur a minimum of 100 feet away from any riparian habitat or intermittent streams. Suitable containment procedures shall be implemented to prevent spills. A minimum of one spill kit shall be available at each work location near riparian, sensitive communities, wetlands or streams.
- Work within streams and wetlands shall be limited to the dry season when no surface water is present.
- Activities within drainages and wetlands shall be limited to the minimum necessary to construct the crossing structure associated with the access road. All equipment operating within streams shall be in good conditions and free of leaks. Spill containment shall be

installed under all equipment staged within riparian and sensitive habitats, streams and wetland areas and extra spill containment and clean up materials shall be located in close proximity for easy access.

(b) Work Area Delineation. To minimize extent of impacts to drainages, work areas in drainages shall be minimized to the minimum area necessary to construct proposed improvements. To the extent feasible, riparian vegetation associated with these features shall be avoided. Avoidance fencing for preserved riparian vegetation shall be placed at the outer dripline of the riparian canopy. All work that shall occur within 50 feet of riparian habitat shall be monitored by a qualified biologist to ensure direct impacts to riparian habitat are minimized, and all impacts to special status species are avoided. Riparian setbacks and all native riparian habitat to be avoided by the project shall be fenced or flagged before construction occurs in adjacent areas. A biological monitor shall be present during initial work to ensure compliance with off-limits areas.

(c) Riparian and Aquatic Resource Mitigation. Where permanent impacts result in removal of streambed, wetland, or riparian vegetation, permanent impacts shall be mitigated at a 2:1 ratio (acreage of riparian corridor preserved and enhanced: acreage of riparian corridor impacted) and shall include replacement plantings to offset loss of native trees and shrubs from the project site. Temporary impacts shall be restored in place at a 1:1 ratio (linear feet restored: linear feet impacted). The design, monitoring schedule, and success criteria for mitigation planting shall be described in a project Aquatic Resource Mitigation and Monitoring Plan that demonstrates no net loss in acreage or function described under measure BIO-3.

Where mitigation is accomplished through preservation, restoration, and enhancement, preserved riparian corridors and any surrounding uplands above the top of bank within the area to be preserved shall be placed in a conservation easement or similar legal mechanism and managed in perpetuity. A CDFW Streambed Alteration Agreement (SAA) would be required for activities affecting the bed, bank and riparian areas associated with streams in the development footprint. This SAA may include additional requirements beyond those required here.

Significance After Mitigation

Compliance with Mitigation Measure BIO-2, as well as Mitigation Measures BIO-1 and BIO-3, and existing applicable regulations would reduce impacts to sensitive habitats to *a less than significant* level.

Threshold:	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?

Impact BIO-3 IMPLEMENTATION OF THE PROJECT WOULD POTENTIALLY REDUCE THE ACREAGE AND OTHERWISE IMPACT NATURAL DRAINAGES AND STREAMS AND/OR WETLANDS THAT MAY BE JURISDICTIONAL WATERS UNDER SECTION 404 OF THE CLEAN WATER ACT. THIS IMPACT WOULD BE CLASS II, LESS THAN SIGNIFICANT WITH INCORPORATION OF MITIGATION.

As described above, construction of the proposed crossing structure on the access road would result in direct impacts to approximately 50 linear feet of the southeastern ephemeral drainage. This drainage is likely to be regulated by USACE, RWQCB, and CDFW as a water of the U.S. and the State.

Additionally, seep features adjacent to the drainage in Lot 10 support some wetland vegetation, are potentially under USACE jurisdiction, and may be impacted through site grading or alteration of hydrology feeding the seep.

No direct disturbance of the intermittent tributary of Davenport Creek is proposed. Indirect impacts to the water quality of the tributary and to Davenport Creek may occur as a result of runoff from the project site.

The proposed lots are all located outside potentially jurisdictional drainages, and riparian and wetland areas, and would not directly impact these features. Grading and construction activities could generate runoff that could have short-term significant impacts to onsite drainages. Silt, sedimentation, or run-off from construction practices could affect water quality in on-site drainages and in turn affect the species residing in or utilizing these areas.

Mitigation Measures

The following mitigation measures would be required for the project to reduce potential impacts to natural drainages and streams and/or wetlands that may be jurisdictional waters of the California Department of Fish and Wildlife, Regional Water Quality Control Board, and/or U.S. Army Corps of Engineers.

BIO-3

(a) Wetland Avoidance and Minimization. Impacts to wetlands shall be avoided to the extent feasible. General project staging and laydown activities shall not occur within wetlands during construction. To avoid unnecessary encroachment into wetlands, all wetlands to be preserved in the project site shall be clearly shown on project plans and the limits marked with highly visible flagging, rope, or similar materials in the field. Access allowed within these features for the purposes of construction in and near such features (e.g., road crossings, trenching) shall be clearly delimited on project plan sets, and these allowed work limits shall also be staked in the field, to prevent construction personnel from causing impacts to areas outside of work limits. Where necessary, silt fencing or other measures may be used to protect adjacent wetlands from sediment transport or other indirect impacts that could result from adjacent construction. Maintenance activities associated with roads and crossings shall not be staged within wetlands. A biological monitor shall be present to ensure compliance with off-limits areas.

(b) Aquatic Resource Mitigation and Monitoring Plan. To compensate for permanent impacts to streambed, riparian, and wetlands on site, streambed, riparian habitat, and wetlands shall be created, preserved, restored or enhanced in kind, and managed in perpetuity at a 2:1 mitigation ratio (acres created and preserved: acres impacted). Permanent loss includes all aquatic resources affected by permanent fill placement (which may occur, for example, from mass grading or new road or structure placement). Temporary impacts to wetlands shall be mitigated through onsite restoration. The permanent protection and management of the mitigation area shall be ensured through an appropriate mechanism, such as a conservation easement granted to a public or private entity authorized by Section 815.3 of the California Civil Code to acquire and hold conservation easements, deed restriction, or fee title purchase.

A project-specific Aquatic Resource Mitigation and Monitoring Plan shall be prepared by a qualified restoration ecologist and shall include, at a minimum, the following information:

1. Wetlands, riparian areas, and waters impacts summary and habitat mitigation actions;

2. Goals of the restoration to achieve no net loss;
3. A map depicting the location of the mitigation site(s) and a detailed description of existing site conditions;
4. A detailed description of the mitigation design, including:
    a. Location of the restored, enhanced, or created features;
    b. Proposed site construction schedule;
    c. Description of existing and proposed soils, hydrology, geomorphology, and site stability;
    d. Mitigation plantings for the loss of existing riparian/wetland habitat shall be located in the drainages that are proposed to be modified or preserved as part of the project to the fullest extent feasible. The compensatory program shall provide a minimum 2:1 ratio of habitat values and functions to that impacted.
    e. Restoration plant palettes shall be with appropriate native species from locally collected stock.
    f. A detailed description of the steps required for site preparation and a conceptual installation plan;
    g. A description of recommended soil amendments and other site preparation;
    h. Development of a planting plan including details on plant procurement, if necessary, propagation, allowable species for seeding and relative pounds/acre, and application;
    i. Maintenance plan for the restored areas or created wetlands and riparian plantings;
    j. A description of specific monitoring metrics, and objective performance and success criteria, such as delineation of created area as jurisdictional wetland per United States Army Corps of Engineers (USACE) methods within five years of construction, minimum riparian tree and canopy cover measures in the enhanced stream reaches within 10 years of restoration, and others;
    k. Monitoring methods for vegetation and soils, and measures stipulating quantitative monitoring to occur once per year for at least five years following construction of the wetlands or until success criteria are met;
    l. A list of reporting requirements and reporting schedule; and
    m. A contingency plan for mitigation elements that do not meet performance or final success criteria within five years. This plan shall include specific triggers for remediation if performance criteria are not being met and a description of the process by which remediation of problems with the mitigation site (e.g., presence of noxious weeds) shall occur.

Permits from the USACE pursuant to Section 404 of the Clean Water Act, a water quality certification from the Regional Water Quality Control Board (RWQCB) pursuant to Section 401 of the Clean Water Act, and a Streambed Alteration Agreement from the CDFW pursuant to Section 1600 et seq. of the California Fish and Game Code are typically require for any grading or fill activity within drainages and wetlands, and may include additional mitigation requirements. The Aquatic Resource Mitigation and Monitoring Plan shall be submitted to the County Department of Planning and Building prior to issuance of grading permits.

(c) Erosion and Sedimentation Control. To control sedimentation during and after project implementation, appropriate erosion control best management practices (i.e. silt fence, etc.)

shall be implemented to stabilize all disturbed soils. No plastic monofilament netting shall be utilized on-site.

During construction, no litter or construction debris shall be placed within jurisdictional areas. All such debris and waste shall be picked up daily and properly disposed of at an appropriate site. In addition, all project-generated debris, building materials, and rubbish shall be removed from any potential jurisdictional area and from areas where such materials could be washed into them.

Any substances which could be hazardous to aquatic species resulting from project-related activities shall be prevented from contaminating the soil and/or entering any potential jurisdictional area.

During and after construction, inspection and maintenance will be performed by a Qualified SWPPP Practitioner or a biologist with erosion and sediment control experience to identify and repair areas of concentrated runoff and sediment transport.

Implement a planting plan designed to provide temporary and permanent vegetative cover of exposed soils to minimize erosion.

Exposed soils shall be hydroseeded immediately upon completion of ground-disturbing activities, and allowed sufficient time to establish prior to the rainy season (October-April).

Significance After Mitigation

Implementation of Mitigation Measure BIO-3, as well as implementation of Mitigation Measure BIO-2, would reduce the project impacts to natural drainages and streams and/or wetlands that may be jurisdictional waters of the California Department of Fish and Wildlife, Regional Water Quality Control Board, and/or U.S. Army Corps of Engineers 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-4 IMPLEMENTATION OF THE PROJECT WOULD INTERFERE WITH THE MOVEMENT OF RESIDENT OR MIGRATORY FISH OR WILDLIFE SPECIES OR WITH ESTABLISHED RESIDENT OR MIGRATORY WILDLIFE CORRIDORS. THIS IMPACT WOULD BE CLASS II, LESS THAN SIGNIFICANT WITH INCORPORATION OF MITIGATION.

Site alteration and construction of new homes, roadways, utility and drainage infrastructure, increased noise, and lighting associated with the project could disrupt the movement of specials status species including burrowing owl, American badger, and migratory birds and raptors, as well as common wildlife species. Development of a crossing structure over one of the on-site drainages may result in a temporary barrier to movement during construction. Although the loss of grassland habitat would be a permanent impact, effects on wildlife movement are expected to be temporary during construction because suitable corridors around the site would remain intact and wildlife species are expected to adapt and continue to use the remaining habitats. Long-term impacts to wildlife movement and special status species could occur due to the increased human presence onsite, lighting on homes and along roadways, noise from traffic and human activity, activity and noise of domestic pets, and other human activities.

Mitigation Measures

Implementation of Mitigation Measure BIO-1, BIO-2, and BIO-3 would reduce potential impacts to wildlife movement to a *less than significant* level by adjusting the timing of construction activities in drainages on the project site, minimizing impacts to trees, as well as reducing night lighting onto remaining habitats.

Threshold:	Would the project conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?

Impact BIO-5 IMPLEMENTATION OF THE PROJECT COULD CONFLICT WITH LOCAL POLICIES OR ORDINANCES PROTECTING BIOLOGICAL RESOURCES, SUCH AS COUNTY OF SAN LUIS OBISPO POLICIES REGARDING NATIVE TREES. THIS IMPACT WOULD BE A CLASS II, LESS THAN SIGNIFICANT WITH INCORPORATION OF MITIGATION.

Implementation of the project would result in the removal of up to five coast live oak trees. Additionally, as previously noted, an estimated eight additional trees were removed from the footprint during the biological resource analysis supporting this project. The General Plan Conservation and Open Space element identifies policies for protection of native trees, including mitigation for impacts that are not avoided in new developments. Therefore, removal of oak trees from the project site would result in a potentially significant impact due to conflict with local policies regarding native trees.

Mitigation Measures

The following mitigation measures would be required to reduce impact BIO-5 to a less than significant level.

BIO-5

(a) Tree Protection and Replacement Plan. To minimize impacts to native trees and offset removals, a tree protection and replacement plan shall be prepared prior to initiation of construction, and implemented throughout construction. At a minimum, the plan shall include the following elements:

1. The location and extent of driplines for all native trees with a diameter at breast height (dbh) of 6 inches or greater, within 25 feet of grading limits shall be identified. Construction envelopes shall be designated outside the driplines of all oak trees and riparian areas. All ground disturbances including grading for building, access ways, easements, subsurface grading, sewage disposal, and well placement shall be prohibited outside construction envelopes.
2. All native trees with a dbh of 6 inches or greater, within 25 feet of proposed ground disturbances shall be temporarily fenced with chain-link or other material throughout all grading and construction activities. The fencing shall be installed six feet outside the dripline of each oak tree, and shall be staked every six feet. No construction equipment shall be staged, parked, stored or operated within six feet of any oak tree dripline.
3. During construction, washing of concrete, paint or equipment shall occur only in areas where polluted water and materials can be contained for later removal from the site. Washing shall not be allowed near sensitive biological resources. An area designated for

washing functions shall be identified on plans and clearly marked on the project site during construction.

4. No permanent irrigation shall occur within the dripline of any existing oak tree.
5. No fill soil, rocks, or construction materials shall be stored or placed within six feet of the dripline of oak trees. Any trenching required within the dripline or sensitive root zone of any oak tree to be preserved shall be done by hand. Any construction activity required within three feet of an oak trees dripline to be preserved shall be completed with hand tools to the extent feasible.

The plan shall identify requirements for replacement plantings, including installation, temporary irrigation, maintenance, and follow-up monitoring for a minimum of seven years. Replacement plantings shall be in kind, and shall be installed at a 4:1 ratio for each oak tree over 6 inches in diameter that is removed, and at a 2:1 ratio for each oak tree over 6 inches in diameter at breast height that is impacted. Success criteria and an adaptive management strategy shall be included in the plan. Plantings of oak trees can be included as a component of the Riparian and Aquatic Resources Mitigation work where restoration with oak trees is compatible with the restoration site condition and goals. The plan shall be submitted to the County Department of Planning and Building prior to the start of construction. An annual monitoring plan summarizing implementation progress shall be submitted by January 31 of the following year until success criteria are met.

Significance After Mitigation

Implementation of Mitigation Measure BIO-5 would reduce impacts associated with native tree removal to *less than significant* levels.

c. Cumulative Impacts

Significance criteria for cumulative impacts to biological resources are based upon:

- The cumulative contribution of other approved and proposed projects to fragmentation of open space in the project vicinity;
- The loss of sensitive habitats and species;
- Contribution of the project to urban expansion into natural areas; and
- Isolation of open space within the proposed project by future projects in the vicinity.

Urban development within the County of San Luis Obispo to the east and north of the project site has eliminated a significant portion of the natural communities that once existed in these areas. Without mitigation, impacts to special status plants and wildlife, nesting birds, loss of sensitive natural communities, and impacts to riparian areas, ephemeral drainages, and wetland, in combination with impacts resulting from other current and future projects in the San Luis Obispo area would be potentially significant. However, implementation of Mitigation Measures BIO-1 through BIO-5 would reduce project impacts to a less than significant level. The project site is adjacent to continuous open areas of native habitats to the south and west, and a component of the project includes retention of over 100 acres of undeveloped areas. Thus, the project would not contribute considerably to cumulative impacts on locally occurring biological resources.

4.5 Cultural Resources

4.5.1 Setting

This section is based on the Archaeological Inventory for Jack Ranch, Edna Valley Residential Cluster Project, Tentative Vesting Tract 2429, San Luis Obispo County, California (Archeological Inventory) prepared by Cultural Resources Management Services (CRMS; August 2016) and a Paleontologic Resource Inventory and Impact Assessment (Paleontologic Inventory) prepared by Paleo Environmental Associates (December 2004). The term "project area" used herein refers to the survey area used in the Archeological Inventory, as shown on Figure 18. This comprises the area of the project site proposed for development.

a. Regional Setting

Prehistoric Setting

Archaeological evidence indicates that coastal San Luis Obispo County was occupied as early as 9000 years ago, as indicated by dates from excavations at Diablo Canyon (Greenwood 1972) and Edna Valley (Fitzgerald 1998). Archaeological investigations completed along the central coast of California have supported the creation of a general culture historical sequence (Erlandson 1994; King 1990; Jones et al. 1994; Mikkelsen et al. 1998). Temporal periods include the Paleoindian Period (ca. 11000 BP to 8500 BP), the Millingstone Period (ca. 8500 BP to 5500 BP), the Early Period (ca. 5500 BP to 3000 BP), the Middle Period (ca. 3000 BP to 1000 BP), the Middle/Late Transition Period (ca. 1000 BP to 700 BP), and the Late Period (ca. 700 BP to Spanish contact).

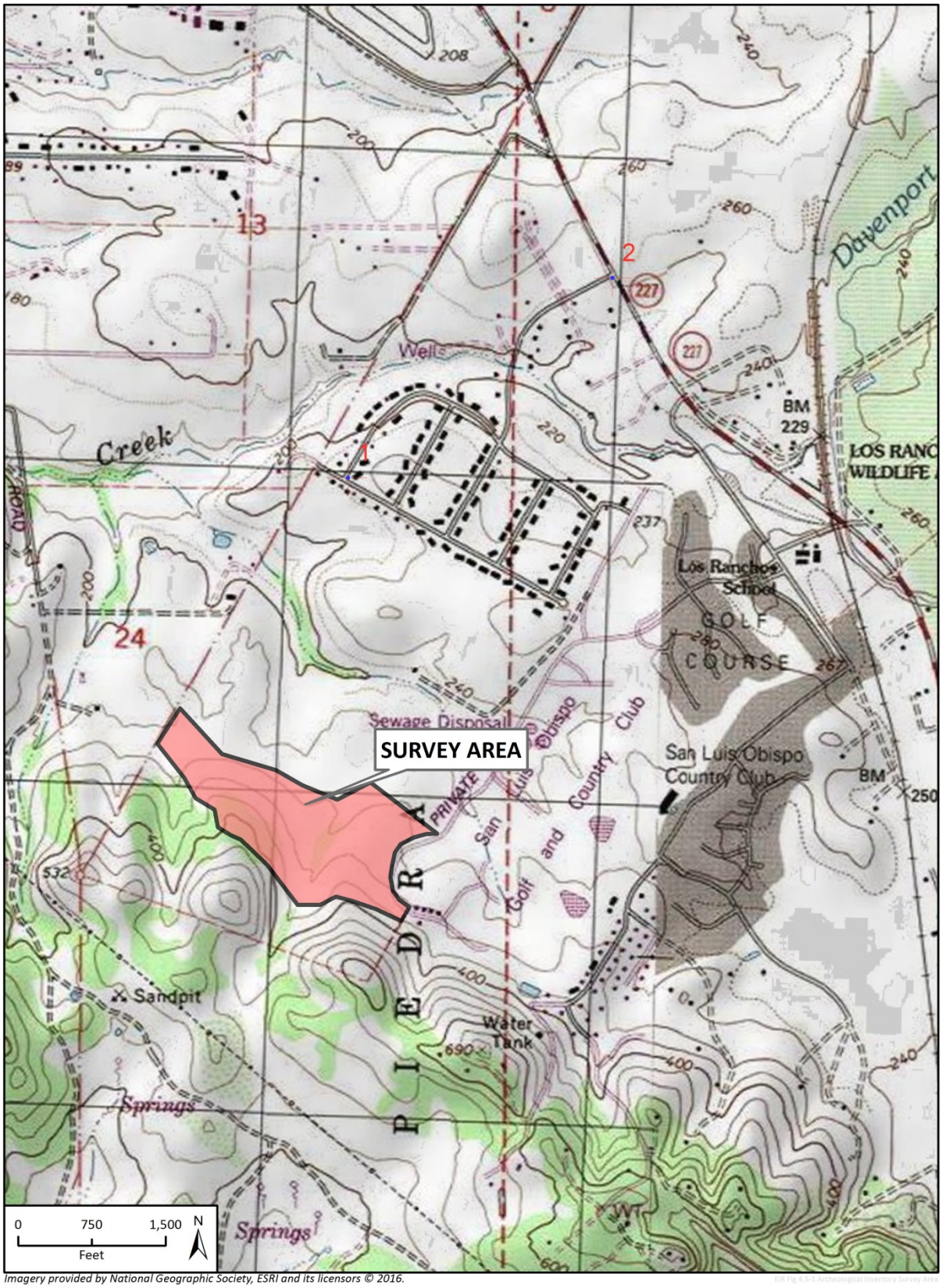
PALEOINDIAN PERIOD (CA. 11000 BP TO 8500 BP)

Although the Paleoindian Period is documented clearly in other parts of California, it is not well substantiated in the central coast of California. It is important to note, though, that people were indeed present in California at this time. Until recently, it has been thought that human activity was minimal, or to have left minimal material traces, in the central coastal areas of California. Thus far, only one site in San Luis Obispo County, near Pismo Beach, has provided confirmed evidence of human occupation at this early date.

MILLINGSTONE PERIOD (CA. 8500 BP TO 5500 BP)

The Millingstone Period is named after the groundstone tools, used for processing nuts and seeds, which first appeared in the archaeological record of the area during this time period. Along the Santa Barbara Channel, sites from the Millingstone Period contain high densities of handstones, milling slabs, thick rectangular (L-series) beads of *Olivella* shell, and shell refuse middens (Glassow 1996; Warren 1967; Bennyhoff and Hughes 1987). Remains of fish and terrestrial animals are minimal. At this time, the local diet was characterized by protein-rich shellfish and high-caloric nuts and seeds.

Figure 18 Archeological Inventory Survey Area



Imagery provided by National Geographic Society, ESRI and its licensors © 2016.
Base Map: USGS 7.5 minute Pismo Beach and Arroyo Grande NE Quadrangles

EARLY PERIOD (CA. 5500 BP TO 3000 BP)

The Early Period is characterized by the same material remains found in the Millingstone Period (e.g., handstones, milling slabs, and L-series *Olivella* beads), along with the appearance of some new items such as mortars and pestles. Also, an increase is noted in the frequency of large side-notched projectile points. In the faunal assemblage, fish bone and terrestrial animal bone increase in abundance. The appearance of a new material assemblage of tools has been interpreted as either the arrival of a new immigrant population (see Lathrap and Troike 1984) or as a result of local developmental changes in technology and economy (see Erlandson 1997; Glassow 1997). Factors such as functional variability between sites, seasonal variation, and diverse adaptive strategies in different environmental settings probably are responsible for the development of the material culture assemblage typical of the Early Period. In brief, the economy of the Early Period seems to have been more specialized than it was previously.

MIDDLE PERIOD (CA. 3000 BP TO 1000 BP)

The Middle Period shows an increase in the diversity of the material culture assemblage. Projectile points include contracting stems and possibly concave base variants. Beads of *Olivella* shell include a variety of types (Bennyhoff and Grantham 1994). Other shell ornaments made of abalone (*Haliotis* spp.) shell include disk ornaments, perforated disks, and rings with incised edges (Jones et al 2007; Joslin 2010). Ornaments made of giant keyhole limpet (*Megathura crenulata*) shell include plain and flat-ended rings. An increase is noted in the remains of nearshore schooling fish such as anchovies (*Engraulis* spp.), herring (Clupeidae family), and smelt (Osmeridae family). Circular fishhooks are present in the tool assemblage (Glassow 1996; Jones 1995). In the southern Chumash areas, evidence is found for the use of plank canoes and harpoons, indicating exploitation of deep sea ecological zones, but such evidence is lacking around the project area. In the project area, economic emphasis most likely continued to focus on the same resources as previously targeted in the Early Period.

MIDDLE/LATE TRANSITION PERIOD (CA. 1000 BP TO 700 BP)

The Middle/Late Transition Period is characterized by further specialization in the material culture assemblage. Among the lithic projectile points, specific artifact types include contracting stem points and double side-notched points (Glassow 1996). Beads of *Olivella* shell include types B2, B3, G1, G2, G6, K1, and possibly D1 (Bennyhoff and Grantham 1994). Curved fish hooks are also noted (Jones 1995). Intensification of the marine economy is well documented along the Santa Barbara Channel along with changes in projectile point technology for the hunting of terrestrial animals (Glassow 1996), but these same changes are not evident in the northern Chumash areas such as in the project area.

LATE PERIOD (CA. 700 BP TO SPANISH CONTACT)

By the Late Period, precursors of the Chumash had developed a complex, socially stratified society involving extensive economic networks throughout the region. A wide variety of resources were exploited from terrestrial, riparian, littoral (shoreline) and pelagic (deep-water) environments. Habitation was most dense near littoral or riparian habitats, where a diverse array of resources could be most easily obtained. The Late Period is the period that relates most appropriately to the living systems observed during the early historic period, including a suite of *Olivella* shell beads, groundstone artifacts, chert and obsidian projectile points and other flaked tools, and fishhooks. Arnold (1987, 1992) argues that in the southern Chumash areas, *Olivella* sp. beads came to be used

as money currency, associated with the development of a highly structured social and political system. During this time period, southern Chumash occupation areas included several densely-populated villages. In contrast, the northern Chumash occupation areas (such as in the Morro Bay/ Cayucos area) was characterized by widely scattered, sparse populations.

Historical Setting

European contact in the San Luis Obispo region may have begun as early as 1587 with the visit of Pedro de Unamuno to Morro Bay, although some scholars have questioned this based on the ambiguity of Unamano's descriptions (Mathes 1968). A visit in 1595 by Sebastian Rodriguez Cermeno is better documented (Jones et.al. 1994:11). The earliest well-documented descriptions come from accounts by members of Gaspar de Portola's land expedition, which passed through the region in 1769 (Squibb 1984). No large villages, such as those seen along the Santa Barbara channel, were reported by early travelers in the San Luis Obispo region.

Permanent Spanish settlement of the region began with the founding of Mission San Luis Obispo de Tolosa in 1772. As elsewhere, induction into the missions had a devastating effect on the local inhabitants, requiring them to live and work at the mission and abandon their former lifeways. All the villages that had been inhabited at the time of European contact were completely deserted by 1804. By the time the missions were secularized in 1834, the Chumash population had been greatly reduced by disease and the disintegration of their social structure. During this time large ranchos were also being created throughout California. In the central coast region extensive cattle ranching was established.

In 1822, Mexico attained independence from Spain. The Secularization Act, passed by the Mexican congress in 1833, provided for the immediate re-distribution of the missions and the transfer of mission lands to settlers and Indians. Work toward this end began in 1834 under California Governor Figueroa. Many grants were made in the region that was to become San Luis Obispo County. In 1848 at the end of the Mexican-American War, California was ceded to the United States and admitted to the Union in 1850. All grants were then subject to validation under U. S. laws.

In particular, the project area is on a portion of the Corral de Piedra land grant, given to Jose Maria Villavicencio in 1841 (Angel 1883:350). In 1866 the Steele Brothers, wealthy dairymen from the Bay Area, bought the Corral de Piedra, as well as Pismo, Bolsa de Chamisal and Arroyo Grande Ranchos (Krieger 1988:66). The purchase of the Corral de Piedra became problematic though because the Villavincencio family's title to the land proved defective. This involved the Steele brothers in two decades of costly litigation to secure the holding (Krieger 1988:67).

The drought of the early 1860s and its disastrous effect on the cattle industry that supported the ranchos led to the break-up of these large holdings and a dramatic change in the local economy of the region. By the 1880s, most of the ranchos were in the hands of Anglo owners. The region as a whole soon became a major agricultural area known for its fertility and variety of products (Angel 1883:230). This agricultural heritage has continued to the present, but within the last three decades, the emphasis has evolved from cattle and grain crops to viticulture. The Edna Valley is now recognized as a world class wine producing region. The continuing success of the California Polytechnic State University over the past 100 years continues to bring new residents to the Central Coast, as does the growing technology industry. These industries and facilities, and the generally mild climate and high standard of living continue to attract new residents to the area.

FIELD INVESTIGATION

For the Archeological Inventory, a pedestrian survey of the project area was performed on July 15, 2016. Transects of approximately five meters were walked over the project area. The surface was intensively inspected for any sign of cultural remains. Due to poor visibility, particular attention was paid to rodent burrow spoil piles, of which there were many. Several Monterey chert cobbles were seen, but none of these showed any indication of modification other than by natural forces. A few outcrops occur on the property, but no bedrock milling features such as mortars or slicks were present. No archaeological artifacts or features, or midden soils were observed.

CULTURAL RESOURCES RECORDS SEARCH

Archeological Resources

A records and literature search was also conducted for the Archeological Inventory of the project site. The search was conducted at the California Historic Resource Information System (CHRIS) Central Coast Information Center, University of California, Santa Barbara, which is the State-designated regional clearinghouse for archaeological site information for San Luis Obispo County. The search parameters included all known archaeological sites and previous cultural resource studies within a one-quarter mile radius of the project area. Six previous cultural resources studies have been conducted within a one-quarter mile radius of the project area. No archaeological sites have been recorded within the search area. Charles Dills (1980a, 1980b, 1981) performed a records search and archaeological survey for the a sewer project at the San Luis Obispo Country Club and Estates adjacent to the eastern boundary of the project site, with no archaeological remains reported. In 1989, Dills once again investigated the archaeological potential of land owned by the Country Club, but again discovered no archaeological evidence.

An archaeological inventory survey of most of the current project area was conducted in 2001 by CRMS (Clift and Farrell). At that time, the parcel was overgrown, so another survey was performed following disking in July of 2016 by CRMS. Mineral soil visibility was excellent during the second field survey. No archaeological resources were found.

Historic Properties

A search of the National Register of Historic Places, the California Register of Historic Places, California Inventory of Historic Resources, and the California Historical Landmarks revealed no historic properties.

Tribal Cultural Resources

A request for a Sacred Lands File (SLF) was sent to the Native American Heritage Commission (NAHC) in Sacramento, with a request for a list of names and contact information for Native American tribes, individuals, and organizations that may have knowledge or concerns about resources in the project area. The NAHC responded with negative results from the SLF search with a caveat that neither the NAHC nor the CHRIS files are exhaustive. As such, a negative response to these researches does not preclude the existence of a cultural place. NAHC provided the following list of affiliated tribes to whom letters were sent inviting consultation: Santa Ynez Band of Mission Indians, Barbarefio/Venturefio Band of Mission Indians, San Luis Obispo County Chumash Council, Salinan Tribe of Monterey and San Luis Obispo Counties, Santa Ynez Tribal Elders Council, Coastal Band of the Chumash Nation, yak tityu tityu Northern Chumash Tribe, Salinan-Chumash Nation, and

the Northern Chumash Tribal Council. No responses were received in response to the tribal consultation letters that were sent out regarding the project.

Paleontological Resources

For the Paleontologic Inventory, a review of geologic maps and reports covering the surficial geology of the parcel was performed for: 1) determination of the rock units exposed in the parcel, particularly those rock units known to be fossiliferous, and 2) delineation of their respective areal distributions. A review of published and unpublished geologic and paleontological literature was completed to document the number and locations of previously recorded fossil sites in and/or near the parcel from each rock unit exposed in the parcel, and the types of fossil remains the rock unit produced locally. The literature review was supplemented by archival searches conducted at the Natural History Museum of Los Angeles County Vertebrate Paleontology Department (LACM) and the University of California Museum of Paleontology (UCMP) (via UCMP On-line Collections Databases) for additional information regarding the occurrences of fossil sites and remains in and/or near the parcel. In addition, a field survey of the parcel was conducted: 1) to determine the condition of any previously recorded site in the parcel, 2) to document the presence of any unrecorded fossil site, and 3) to substantiate the presence of strata suitable for containing fossil remains.

The baseline paleontological resource inventory of the parcel by rock unit as well as an assessment of the potential paleontological productivity and paleontological/scientific importance of each rock unit identified the Pismo Formation and the Paso Robles Formation as the rock units present on the project site (refer to *Geologic Resources*).

The Pismo Formation underlies the southern section of the project site including the proposed development area. However, the Pismo Formation has virtually no exposure within the project site and no exposure within the development area.

The Paso Robles Formation underlies the central and northern portion of the project site including the existing vineyard and proposed vineyard expansion areas. The Paso Robles Formation does not underlie the development area. This formation has very little exposure within the project site and no exposure within the development area. A previously recorded fossil site (LACM locality 7454) occurs in the Paso Robles Formation on the project site, but well outside (approximately 0.6 mile north of) the development area. This site is a bonebed that has yielded abundant fossilized bones and teeth representing a diversity of marine vertebrate species (sharks and rays, fishes, birds, sea lions, walruses, dugongs, baleen whales, porpoises), and birds. The site is highly productive, and articulated partial skeletons now are exposed at the surface as a result of excavation. Presumably, this site is in the basal part of the formation. The Paso Robles Formation has included fossilized remains representing late Cenozoic marine invertebrate species and marine and continental vertebrate species at a number of previously recorded sites elsewhere in San Luis Obispo County and in adjacent Monterey County.

4.5.2 Impact Analysis

a. Methodology and Significance Thresholds

To determine impacts to cultural and paleontological resources, it is necessary to assess the significance of the resources and the effects of the project on their significance. The significance of cultural resources on the project site is based on their importance to scientific-historic research, their importance to Native Americans, and their educational and community value for the general

public. The following thresholds are based on Appendix G of the *State CEQA Guidelines.* Impacts would be significant if the project would:

- Disturb archaeological resources;
- Disturb historical resources;
- Disturb paleontological resources; and/or
- Cause a substantial adverse change to a Tribal Cultural Resource.

The State of California has provisions in the California Environmental Quality Act (CEQA) statutes and the California Public Resources Code for the protection and preservation of significant archaeological resources. According to the *State CEQA Guidelines*, a cultural resource shall generally be considered "historically significant" if the resource meets the criteria for listing on the California Register of Historic Resources (Public Resources Code Section 5024.1, Title 14 CCR, Section 4852) including the following:

A. Is associated with events or patterns of events that have made a significant contribution to the broad patterns of the history and cultural heritage of California and the United States.
B. Is associated with the lives of persons important to the nation or to California's past.
C. It 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.
D. It has yielded, or may be likely to yield, information important to the prehistory or history of the State and the Nation.

The fact that a resource is not listed in, or determined to be eligible for listing in the California Register of Historical Resources, not included in a local register of historical resources (pursuant to section 5020.1(k) of the Public Resources Code), or identified in an historical resources survey (meeting the criteria in Section 5024.1(g) of the Public Resources Code) does not preclude a lead agency from determining that the resource may be an historical resource as defined in Public Resources Code sections 5020.1(j) or 5024.1.

If the project may cause damage to a significant archaeological resource, the project may have a significant effect on the environment. Section 15064.5 of CEQA pertains to the determination of the significance of impacts to archaeological and historic resources. CEQA provides guidelines for administering to archaeological resources that may be adversely affected by project development in Section 151226.4. Achieving CEQA compliance with regard to treatment of impacts to significant cultural resources requires that a mitigation plan be developed for the resource(s). Preservation in place is the preferred manner of mitigating impacts to significant archaeological resources.

The paleontological tasks were conducted in compliance with the Society of Vertebrate Paleontology (SVP; 1995) guidelines for assessing the significance of construction-related adverse environmental impacts on paleontological resources, or the paleontological sensitivity of a particular rock unit to adverse impacts. Paleontological resources are afforded protection under various federal, state, and local environmental laws and guidelines. The potential for destruction or degradation by construction impacts to nonrenewable paleontological resources is considered to be significant under CEQA.

The paleontological importance (high, moderate, low, none, or undetermined) of a rock unit exposed within the project site is the measure most amenable to assessing the scientific importance

of the paleontological resources of the site because the areal distribution of a rock unit can be delineated on a topographic map. The paleontological importance of a rock unit reflects 1) its potential paleontological productivity and 2) the scientific importance of the fossils it has produced locally.

The potential paleontological productivity (high, moderate, low, none, or undetermined) of a rock unit exposed in the parcel is based on the abundance and densities of fossil specimens and/or unrecorded/ previously recorded fossil sites in exposures of the unit in and near the parcel. Exposures of a specific rock unit in the parcel are most likely to yield fossil remains representing particular species in quantities or densities similar to those previously recorded from the unit in and near the parcel. The criteria for establishing the potential paleontological productivity of an exposed rock unit are described below.

1. High potential: rock unit contains comparatively high density of unrecorded/previously recorded fossil sites and has produced numerous fossil remains in and/or near parcel, and is very likely to yield additional similar remains in parcel.
2. Moderate potential: rock unit contains relatively moderate density of unrecorded/previously recorded fossil sites and has produced some fossil remains in and/or near parcel, and is somewhat likely to yield additional similar remains in parcel.
3. Low potential: rock unit contains no or comparatively low density of previously recorded fossil sites and has yielded very few or no fossil remains near parcel, and is not likely to yield any remains in parcel.
4. Undetermined potential: rock unit has limited or no exposure in parcel, is poorly studied, contains no previously recorded fossil site, and has produced no fossil remains near parcel. However, in parcel region, same or correlative and/or lithologically similar rock unit contains sufficient recorded fossil sites to suggest rock unit in parcel has at least a moderate potential for containing unrecorded fossil sites (note: elsewhere in California, exposures of rock units with few or no previously recorded fossil sites recently have proven abundantly fossiliferous during surveying, monitoring, or processing of fossiliferous rock samples as part of mitigation programs for other earth-moving projects).
5. No potential: unfossiliferous artificial fill and igneous and high-grade metamorphic rock units with no potential for containing any unrecorded fossil site or yielding any fossil remains.

A fossil specimen is considered scientifically highly important if it is 1) identifiable, 2) complete, 3) well preserved, 4) age diagnostic, 5) useful in environmental reconstruction, 6) a type or topotypic specimen, 7) a member of a rare species, 8) a species that is part of a diverse assemblage, and/or 9) a skeletal element different from, or a specimen more complete than those now available for its respective species. Identifiable fossil land mammal remains, for example, are considered scientifically highly important because of their potential use in providing very accurate age determinations and environmental reconstructions for the rock units in which they occur. The geologic age of some fossil mollusk, and land mammal and plant remains can be determined by carbon-14 dating analysis. Moreover, vertebrate remains are comparatively rare in the fossil record.

Using the definitions presented above, the paleontological or scientific importance of an exposed rock unit would be assessed using the following criteria.

1. High importance: rock unit has comparatively high potential for containing unrecorded fossil sites and for yielding scientifically important fossil remains in parcel similar to those previously recorded from rock unit in and/or near parcel.
2. Moderate importance: rock unit has relatively moderate potential for containing unrecorded fossil sites and for yielding scientifically important fossil remains in parcel similar to those previously recorded from rock unit near parcel.
3. Low importance: rock unit has comparatively low potential for containing any unrecorded fossil site or for yielding any scientifically important fossil remains in parcel.
4. Undetermined importance: rock unit for which too few data are available from parcel and vicinity to allow an accurate assessment of its potential for containing any unrecorded fossil site or for yielding any scientifically important fossil remains in parcel.
5. No importance: unfossiliferous artificial fill and igneous and high-grade metamorphic rock units having no potential for containing any unrecorded fossil site or for yielding any fossil remains.

Note, however, that any fossil site containing identifiable fossil remains as well as the fossil-bearing strata are considered highly important paleontologically, regardless of the paleontological or scientific importance of the rock unit in which the site and strata occur.

The following tasks were completed to establish the paleontological importance of each exposed rock unit.

1. The scientific importance of fossil remains recorded from a rock unit exposed in the parcel was assessed.
2. The potential paleontological productivity of the rock unit was assessed, based on the density of fossil remains and/or previously recorded and newly documented fossil sites it contains in and/or near the parcel.
3. The paleontological importance of the rock unit was assessed, based on its documented and/or potential fossil content in the parcel.

This method of resource assessment is the most appropriate for an areal paleontological resource investigation of the project site because discrete levels of paleontological importance can be delineated on a topographic/geologic map.

b. Project Impacts

Threshold:	Would the project disturb archeological resources?
Threshold:	Would the project disturb historical resources?

Impact CUL-1 NO ARCHEOLOGICAL OR HISTORICAL RESOURCES HAVE BEEN IDENTIFIED ON THE PROJECT SITE. HOWEVER, EARTH DISTURBING ACTIVITIES ASSOCIATED WITH THE PROJECT HAVE THE POTENTIAL TO UNCOVER PREVIOUSLY UNIDENTIFIED CULTURAL RESOURCES. THEREFORE, IMPACTS WOULD BE CLASS II, LESS THAN SIGNIFICANT WITH INCORPORATION OF MITIGATION.

Based on a pedestrian field survey and review of previous cultural resource records, no archeological or historical resources have been identified on the project site. While it is unlikely that subsurface historical or archeological remains are present, the nature of a surface survey does not preclude the possible existence of such remains. Therefore, impacts would be potentially significant.

Mitigation Measures

CUL-1

Halt Work Order for Discovery of Previously Unidentified Cultural Resources. In the event that historical or archaeological remains are discovered during earth disturbing activities associated with the project, an immediate halt work order shall be issued and the County Department of Planning and Building shall be notified. A qualified archaeologist shall conduct an assessment of the resources and formulate proper mitigation measures, if necessary. After the find has been appropriately mitigated, work in the area may resume. A Chumash representative shall monitor any mitigation excavation associated with Native American materials.

Halt Work Order for Discovery of Human Remains. In the event that human remains are exposed during earth disturbing activities associated with the project, an immediate halt work order shall be issued and the County Department of Planning and Building shall be notified. State Health and Safety Code Section 7050.5 requires that no further disturbance of the site or any nearby area reasonably suspected to overlie adjacent human remains shall occur until the County Coroner has made the necessary findings as to origin and disposition pursuant to Public Resources Code Section 5097.98. If the remains are determined to be of Native American descent, the coroner shall notify the Native American Heritage Commission within 24-hours.

Significance After Mitigation

Mitigation Measure CUL-1 would reduce any potential impacts to previously unidentified archeological or historical resources to a less than significant level.

Threshold:	Would the project disturb paleontological resources?

Impact CUL-2 THE PROJECT COULD RESULT IN IMPACTS TO A PREVIOUSLY IDENTIFIED PALEONTOLOGICAL SITE AS WELL AS PREVIOUSLY UNIDENTIFIED PALEONTOLOGICAL RESOURCES WITHIN THE PROJECT SITE. THEREFORE, IMPACTS ASSOCIATED WITH THE DISTURBANCE OF PALEONTOLOGICAL RESOURCES WOULD BE CLASS II, LESS THAN SIGNIFICANT WITH INCORPORATION OF MITIGATION.

The proposed development area is underlain by the Pismo Formation. No surface paleontological resources were observed during field surveys within the development area and the Pismo Formation has no exposure in the development area. However, since the paleontological survey can only confidently assess the potential for encountering surface paleontological resources, there is a potential that buried deposits may occur within the development area.

The Paso Robles Formation includes fossil remains at a number of previously recorded fossil sites in and near the project site and the Pismo Formation includes several previously recorded sites in San Luis Obispo County. This suggests that there is the potential for additional similar, scientifically highly important fossil remains to be encountered during grading on the project site.

In addition, one previously recorded fossil site (LACM locality 7454) occurs in the parcel, but well outside (approximately 0.6 mile north of) the proposed area of development. This site is a bonebed that has yielded abundant fossilized bones and teeth representing a diversity of marine vertebrate species (sharks and rays, fishes, birds, sea lions, walruses, dugongs [sea cows], baleen whales, porpoises), and birds. Currently, the bonebed is subject to disturbance from trespassers, vandals, and curiosity-seekers, because it is a partially excavated and exposed condition, with relatively easy access via farm roads. In addition, the farmworkers who are authorized to be onsite could

inadvertently impact the site with accidental disturbance from field equipment, or water use. The increase in population and on-site activity due to the project could result in an increase of relic collecting and/or vandalism that could result in further and more substantial impacts to the identified paleontological site.

Therefore, impacts associated with disturbance of identified and previously unidentified paleontological deposits would be potentially significant.

Mitigation Measures

CUL-2

Worker Environmental Awareness Program Training. Prior to the initiation of construction activities (including staging and mobilization), the applicant shall ensure all personnel associated with project construction attend a Worker Environmental Awareness Program (WEAP) training. The training shall be conducted by a qualified paleontologist, to aid workers in recognizing paleontological resources that may occur in the project area. The specifics of this program shall include identification of the paleontological resources, a description of the regulatory requirements for the encounter and preservation of such resources, and review of the limits of construction and avoidance measures required to reduce impacts to paleontological 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 provided by the trainer documenting they have attended the WEAP and understand the information presented to them.

Education and Construction Monitoring Program. A qualified paleontologist shall monitor all initial ground disturbing activities within the project site. In the event that paleontological artifacts are encountered during site disturbance, all work in the vicinity of the find will be halted until such time as the find is evaluated by a qualified paleontologist and appropriate mitigation (e.g., curation, preservation in place, etc.), if necessary, is implemented. After the find has been appropriately mitigated and signed off the County Department of Planning and Building and qualified paleontologist, as appropriate, work in the area may resume.

Halt Work Order for Discovery of Previously Unidentified Paleontological Resources. In the event that subsurface paleontological resources are discovered during earth disturbing activities associated with the project, an immediate work stoppage shall be issued and the County Department of Planning and Building shall be notified. A qualified vertebrate paleontologist shall conduct an assessment of the resources and formulate proper mitigation measures, including a monitoring and recovery plan, if necessary. After the find has been appropriately mitigated, work in the area may resume.

Signage for Prohibition of Paleontological Site Tampering. Signs shall be posted on the property stating that unauthorized collecting of paleontological objects and other activities that could destroy or damage the paleontological sites is prohibited. Signs shall also include warning of trespassing violations and imposed fines. Signs shall be posted in a readily visible location prior to the initiation of construction activities and shall be maintained throughout construction and residential occupation.

Paleontological Site Protection Measures. The property owner shall make arrangements to protect the known paleontological site through preparation of a protection plan prior to approval by the County of subdivision improvement plans. Based on consultation with the County, a land trust, or

other entity, the protection plan shall provide protective steps for the resource such as covering the site until such time that the area could be adequately researched and catalogued with property owner consent, under the guidance of the County or other appropriate entity.

Significance After Mitigation

Mitigation Measure CUL-2 would reduce potential impacts to the identified paleontological site as well as to unidentified paleontological resources within the project site to a less than significant level.

Threshold:	Would the project cause a substantial adverse change to a Tribal Cultural Resource?

Impact CUL-3 NO KNOWN TRIBAL CULTURAL RESOURCES EXIST WITHIN THE PROJECT SITE. THEREFORE, IMPACTS ASSOCIATED WITH A SUBSTANTIAL ADVERSE CHANGE TO SUCH RESOURCES AS A RESULT OF THE PROJECT WOULD BE CLASS III, LESS THAN SIGNIFICANT.

In response to a request for a Sacred Lands File (SLF), the Native American Heritage Commission (NAHC) responded with negative results from the SLF search. Additionally, no consultation request was received in a response to letters that were sent to affiliated tribes inviting consultation on the project. Therefore, the project would not result in substation change to any known Tribal Cultural Resources and this potential impact would be less than significant.

c. Cumulative Impacts

Development of the project in conjunction with buildout in the region has the potential to cumulatively impact archeological and paleontological resources. However, archeological and paleontological issues will be addressed on a case-by-case basis to mitigate impacts resulting from individual projects. Therefore, no significant cumulative archeological or paleontological impacts are anticipated to result from the project in conjunction with other projects in the area..

4.6 Geology and Soils

This section is based on review of the *Engineering Geologic and Geotechnical Feasibility Investigation* prepared for the project by Geoinsite, Inc. in June 2016 (refer to Appendix E).

4.6.1 Setting

a. Regional Geologic Conditions

Regional Geology

The San Luis Obispo area is located in the Coast Ranges geomorphic province, which is characterized by northwest-trending, elongated mountain ranges separated by narrow valleys. The project site is located on the northern slopes of the San Luis Range, a rugged upland range that bounds the southwestern margin of the San Luis Valley. The San Luis Valley, which lies between the San Luis Range and the Santa Lucia Range, in an alluvial valley which is punctured by Oligocene volcanic plugs that extend from Islay Hill north of the project site, to Morro Rock.

The San Luis Range is characterized by a thick sequence of folded Tertiary strata known as the Pismo syncline. The Pismo syncline is the dominant structural element of the uplifted San Luis Range. In the vicinity of the project site, the Tertiary strata consist of the Obispo Formation (Miocene), Monterey Formation (Miocene), and Edna and Squire Members of the Pismo Formation (Miocene to Pliocene). The older rocks are locally overlain by Pleistocene-age Paso Robles Formation.

Geologically, the San Luis Range is referred to as the "San Luis-Pismo Structural Block" (Lettis et al., 1994). The project site lies within a geologic terrain known as the Edna Subblock of the larger San Luis-Pismo Structural Block of the San Luis Range. The Edna Subblock is bounded on the northwest by San Luis Creek and on the southeast by Arroyo Grande Creek, both of which flow southwestward through the San Luis Range to the Pacific Ocean.

Historic Seismicity

Historically, major earthquake activity in the project vicinity has generally been sparse. The largest event recorded in the region since 1927 is the 2003 Mw 6.5 San Simeon earthquake. Micro-earthquake activity west of the San Andreas fault zone has been concentrated in the following areas: 1) within the Santa Lucia Range, north of the project site; 2) west of the San Simeon area (offshore); 3) along and east of the Hosgri fault zone within the western Los Osos Domain; and 4) in the southwestern offshore region, west of Point Arguello (Hardebeck 2010).

Major Faults

The most significant faults in the region are described as follows.

LOS OSOS FAULT

The Los Osos fault zone is a range-bounding, southwest-dipping reverse fault with a late Quaternary slip rate of 0.2 to 0.5 millimeter per year (mm/yr). The Los Osos fault consists of multiple fault traces along a generally northwest-southeast-trending zone along the northwestern edge of the San Luis Range. The fault zone has had a complex history of both strike-slip and dip-slip displacement (Lettis and Hall, 1994). As currently characterized, the fault zone is a 50 km long, 2 km wide system of

discontinuous, subparallel, and en echelon fault traces extending from Estero Bay on the north to an intersection with the West Huasna fault southeast of San Luis Valley. Results from new geomorphic mapping, interpretation of reprocessed seismic-reflection data, analysis of seismicity data, and structural analysis suggest that the fault zone dips steeply to the southwest (45 to 70 degrees or possibly steeper), and may be primarily an oblique-slip fault, with a significant component of dip slip to accommodate uplift of the range. Late Cenozoic activity of the Los Osos fault is expressed along the northwestern range front by uplift, tilting, and folding above a blind fault tip (Unruh et al, 2015).

Lettis and Hall (1994) divide the Los Osos fault zone into four segments based on differences in physical and behavioral characteristics. From the northwest to the southeast, the four segments are the Estero Bay (offshore), Irish Hills, Lopez Reservoir, and Newsom Ridge. The most active fault segment is the Irish Hills segment, which is where uplift rates of 0.1 to 0.2 mm/year have been estimated. The project site is located with the Lopez Reservoir Segment, which is not well expressed topographically, and where geomorphic features suggestive of faulting are sparse, laterally discontinuous, and poorly defined (Lettis and Hall, 1994).

EDNA FAULT

The Edna fault is mapped by Hall (1973) as a west- to northwest-trending zone of multiple fault traces extending through the San Luis Range along the northern limb of the Pismo syncline. It is interpreted by Hall (1973) to be a high-angle, down-to-the-southwest normal fault that displaces Pliocene and lower Pleistocene strata. Also according to Hall (1973), the northwestern and southeastern ends of the Edna fault are truncated by the range-bounding and more sinuous Los Osos fault zone. The fault is not considered to be Holocene active because it is overlain by unfaulted marine terraces (Hanson et al., 1994).

The Edna fault is not shown to be a through-going fault by Dibblee (2005). Recent geophysical data indicate that the Edna fault is characterized by several structural features in the northwestern part of the San Luis Range. Lettis and Hall (1994) show the Edna fault to lie at the southwestern margin of the broad range-front bounding Los Osos fault zone.

SOUTHWESTERN BOUNDARY FAULT ZONE

The southwestern margin of the San Luis Range is bordered by a complex zone of late Quaternary reverse, oblique-slip, and possibly strike-slip faults. Grouped together, these faults separate the San Luis-Pismo Structural Block from the subsiding Santa Maria Valley Block to the southwest. The zone of faults is collectively called the Southwestern Boundary fault zone and is 4-10 km wide and over 60 km long (Lettis et al., 2004). The faults generally strike west-northwest and dip steeply to the northeast. Principal structures within this fault zone include the Wilmar Avenue, San Luis Bay, Pecho, Los Berros, Oceano, and Nipomo faults. The cumulative rate of vertical separation across the fault zone, based primarily on deformation of the marine terrace sequence along the coast and southwest side of the range onshore, ranges from about 0.1 to 0.2 mm/yr. The rate for each fault in this zone is generally 0.04 to 0.1 mm/yr.

HOSGRI FAULT ZONE

The Hosgri fault zone is the southern portion of the larger 410 km long San Gregorio-San Simeon-Hosgri fault system. It is an active transpressional, convergent right-slip fault zone that extends southeastward approximately 110 km from a location 6 km offshore of Cambria to a point 5 km northwest of Point Pedernales (Hanson et al., 2004). The Hosgri fault zone lies offshore for its total length. As described above, the fault zone separates the offshore Santa Maria basin on the western

side of the fault zone and the onshore Los Osos domain on the eastern side (PG&E, 2014, Lettis et al., 2004). To the east, the fault zone truncates a marine bedrock platform associated with uplift of the San Luis-Pismo Structural Block. The Hosgri fault zone is characterized by 1 to 3 mm/yr of right-lateral slip.

OCEANIC-WEST HUASNA FAULT ZONE

The Oceanic-West Huasna fault zone forms the east margin of the Los Osos Domain, and is characterized by multiple reverse faults and near-vertical faults that separate Franciscan Complex melange on the southwest from younger Mesozoic and Cenozoic rocks on the northeast (Hall, 1973).

Late Cenozoic uplift of the Santa Lucia Range is accommodated primarily by reverse displacement on the Oceanic-West Huasna fault system. The 2003 San Simeon earthquake (M=6.5) has been attributed to the Oceanic fault due to its proximity to the epicenter. However, the dip and thrust movement of the 2003 earthquake are not consistent with movement on a vertical fault. Researchers have concluded that the 2003 earthquake likely occurred on a blind thrust fault in the Santa Lucia Mountains.

The West Huasna fault zone is characterized by dextral, strike-slip earthquakes and forms the eastern boundary of northwest-southeast trending ranges and range-bounding faults (e.g., Los Osos fault) within the Los Osos Domain.

NACIMIENTO AND RINCONADA FAULTS

The Nacimiento fault and Rinconada fault comprise the tectonic boundary between the coastal Franciscan Complex and the Salinian granitic basement. The Nacimiento fault zone is characterized by multiple, northwest-striking faults and varying styles of earthquake modes, including strike-slip, reverse and normal displacements. Although Quaternary displacement has not been documented, low to moderate seismicity along the fault trend indicates some degree of ongoing strain release (Clark et al., 1994).

The Rinconada fault is an important element of the San Andreas Fault system, and has accommodated about 18 km of post-Miocene offset (Rosenberg and Bryant, 2003). Fault displacement has continued into the late Quaternary and possibly into the Holocene.

SAN ANDREAS FAULT ZONE

The San Andreas Fault zone is the principal element of a network of dextral strike-slip faults that collectively accommodates the majority of relative motion between the Pacific and North American tectonic plates, extending for about 1,100 km along the western side of California. The total fault length can be divided into segments based on historical ruptures. The closest segment to the project area is the Cholame-Carrizo Plain section, which extends southeastward about 200 km from the southern end of Cholame Valley. The most recent rupture event on the Cholame-Carrizo section is the 1857 Mw 7.9 Fort Tejon earthquake, which produced shaking that lasted 1 to 3 minutes and was felt over more than 350,000 square kilometers of central and southern California. The maximum fault movement of about 9 meters occurred in the Carrizo Plain section, 90 to 130 kilometers southeast of Parkfield, and slip on the Cholame section is estimated at 3 to 7 meters (Sieh, 1978). The estimated recurrence interval for large earthquakes on this segment is 100 to 450 years (Bryant and Lundberg, 2002).

b. Project Site Geologic Conditions

Site Topography and Drainage

The project site is located on a north-facing hillside with generally steep to gentle slope gradients. The southern property boundary roughly follows the axis of a northwest-trending ridge line with several peaks between elevations of 525 feet and 625 feet as well as incised, north-flowing drainages. The southern one-third of the property slopes northward from the ridge line at gradients of 25 percent to 50 percent (14 degrees to 26 degrees inclination), with the steeper slope gradients found in the upslope portion of the hillside (generally above an elevation of 425 feet). The northern portion of the property is characterized by low rolling hills between elevations of 200 feet and 300 feet, and with gradients of approximately 8 percent to 17 percent (5 degrees to 10 degrees inclination).

At the time of field mapping by Althouse and Meade, Inc. in March to May of 2016 and February 2017, the southern hillside was covered with weeds, flowers, and grasses. Several clusters of mature oak trees were also present on the slopes, generally between elevations of 350 feet to 450 feet, and in the incised drainage ravines on the site.

Drainage on the property is characterized by a west-flowing creek in the northern portion of the property. The creek drains properties to the east, and there was flowing water at the time of field observations. Hillside drainage is characterized by sheetflow towards well-developed drainage channels that flow into the west-flowing creek. Three incised, north-flowing drainage gullies emanate from a broad linear depression lying south of the southern ridgeline and property boundary. These drainages form gentle swales in the southernmost portions of the property where underlain by the Monterey Formation, and are locally incised up to as much as 15-to 25-feet where underlain by friable sandstone of the Pismo Formation. The 1969 aerial photographs, taken during the wet rainy season of 1968 to 1969, portray recent sedimentation in the downstream portion of the central gully, and local incision of minor tributary gullies. Since development of the vineyard in the 1990s, the sections of the drainages in the northern portion of the property have been slightly modified by grading.

Geologic Conditions

The project site is located on the northern limb of the Pismo syncline, and along the north-facing slopes of the San Luis Range. Geologic units found on and adjacent to the project site include Artificial Fill (Af), Soil and Colluvium, Landslides (Als, Dls), Alluvium (Qal), Paso Robles Formation (QTp), Squire Member – Pismo Formation (Tpps), Edna Member – Pismo Formation (Tmpe), and the Monterey Formation (Tmm). Geologic units on the project site include the Monterey Formation, Pismo Formation, and Paso Robles Formation. In addition, alluvium is present along the central drainage ravine. The Monterey Formation underlies the southernmost portion of the project site and the Paso Robles Formation, which locally may also be equivalent to Pleistocene-age "Older Alluvium", underlies the northern two-thirds of the site. The Squire Member1 of the Pismo Formation is present downslope from the Monterey Formation and upslope of the Paso Robles Formation.

[1] The Squire is considered to be the uppermost of four distinct members of the Pismo Formation by Hall (1973), but is considered to be a separate formation ("Squire Sandstone") by Dibblee (2005). The nomenclature of Hall (1973) is the standard usage in published literature and used in the Geoinsite report.

c. Geological Hazards

Faulting and Surface Fault Rupture

Movement along an active tectonic fault that intersects the ground surface can result in permanent ground displacements which may severely damage built structures. Faults are considered to be "active" if they display evidence of movement within Holocene time (i.e., within the last 11,000 years), and "potentially active" if they display evidence of movement within Quaternary time (i.e., the last 1.6 million years). The State of California regulates development near known active faults through the Alquist-Priolo Special Studies Zone Act. Special Study Zones have been established around known active faults by the California Division of Mines and Geology. Construction of structures for human occupancy are not permitted within a Special Study Zone until a site-specific geologic study has been performed which concludes that a specific site does not lie on or across an active fault trace. The proposed development is not located within a defined State Special Study Zone or County fault zone. However, fault traces associated with the Edna fault zone and Los Osos fault zone are present in the vicinity of the project site. According to previous mapping and the results of the Engineering Geologic and Geotechnical Feasibility Investigation, no primary fault traces associated with the two identified fault zones cross the proposed development area.

Secondary Seismic Ground Deformation

Large earthquakes sometimes cause secondary ground deformation, in addition to primary surface fault rupture. Secondary deformation typically is characterized by minor to insignificant displacements that may be distributed over a wide area. The future locations of possible secondary deformation are difficult to predict, due to the discontinuous and transient nature of such deformation. The potential for secondary deformation in the development area, which may include fissuring or fracturing associated with tectonic movement in the near vicinity, is low to moderate.

Seismic Ground Motion

The project area is situated in an area of moderate seismic activity with potential for moderate to strong ground shaking that may be generated by future earthquakes.

Liquefaction and Lateral Spreading

Liquefaction is a soil behavior phenomenon in which a soil located below the groundwater surface loses a substantial amount of strength during strong earthquake ground shaking. The potential for strength loss is highly dependent on the gradation and density of the soil, with greater potential in looser, less cohesive soils. Recently deposited (i.e., geologically young) and relatively loose natural soils, and uncompact or poorly compacted artificial fills located below the groundwater table, are potentially susceptible to liquefaction.

Lateral spreading is a phenomenon associated with strength loss following liquefaction and involves the lateral movement of a liquefied soil layer (and overlying layers) toward a free face, such as the drainage channel ,through the site.

Soils susceptible to liquefaction are limited to the younger alluvial soil deposits adjacent to the drainage channel that bisects the project site. The area where the proposed access road crosses the drainage channel is not susceptible to substantial liquefaction. However, a portion of access road within the drainage channel is located within the liquefaction hazard zone. In addition, proposed Lot 11, located on the west side of the drainage channel, is underlain by a substantial amount of

liquefiable soils. Furthermore, the roadway that provides access to proposed lots 4, 5, and 6 is partially underlain by the younger alluvial deposits along the drainage channel with potential to be impacted by liquefaction-induced settlement and lateral spreading.

Landslides and Slope Instability

In general, the hillslopes are relatively stable in the proposed development area. However, four probable landslides (Landslides A through D as identified on Plate 6, Engineering Geologic Map, of the *Engineering Geologic and Geotechnical Feasibility Investigation* included in Appendix E) were identified, indicating past instability. These landslides are located in colluvium and deeply weathered Tpps sandstone.

The two "active" (Als) landslides (Landslides A and B) are both shallow features that are visible on 1939 aerial photography, and neither of them shows signs of substantial movement since that time. These landslides are not located within the proposed development area for the project. Due to the location outside of the development area and lack of substantial movement, these landslides would not impact the proposed development.

The two "dormant" (Dis) landslides (Landslides C and D) located on the west side of the central gully are both very old features based on subtle geomorphology and soil profile development. Exploration performed during the feasibility-level investigation indicates that Landslide C is not likely to impact the proposed improvements. However, due to unforeseen results of grading, Landslide C has potential to impact the proposed roadways included in the project. Due to its dormancy and distance from the proposed development area, Landslide D would not impact the proposed development.

Expansive Materials

Highly expansive materials generally are not present on the project site due to the granular nature of the underlying bedrock formations and overlying soils. However, some very thin (less than 1 foot in thickness) soil horizons in the upper two to four feet of the surficial soils may be expansive. In addition, there is a potential for expansive mudstone units to underlie portions of the development.

Ground Shaking

Ground shaking is typically reduced to ground motion components of wave velocity and acceleration. The velocity, acceleration, and predominant period of a site are dependent upon the distance to the fault, the magnitude and failure mechanics of the earthquake, and the nature of the bedrock, alluvium, and soil through which the shock waves must travel. Generally, shock waves attenuate with distance from the focus of the earthquake.

The closest known active fault to the site is the Los Osos fault located in the southeast corner of the site. It is estimated that a magnitude 7.0 earthquake on the Los Osos fault could generate a peak horizontal ground acceleration (PHGA) exceeding 86 to 88 percent of gravity for a Maximum Credible Earthquake and a PHGA exceeding 38 percent of gravity for a Maximum Probably Earthquake (GeoSolutions, Inc., 2000).

The San Andreas Fault is the most likely active fault to produce ground shaking at the site, although it is not expected to generate the highest ground accelerations due to its distance from the site. EQFAULT predicts horizontal acceleration to just exceed 12 percent of gravity from a magnitude 8.0 earthquake on the San Andreas Fault.

In addition to the Los Osos fault, there are approximately 38 known active or potentially active faults within a 100-mile radius from the site capable of producing strong ground shaking at the site (GeoSolutions, Inc., 2000).

d. Mineral Resources

According to the San Luis Obispo County San Luis Obispo Sub Area North Rural Combining Designation Map, no portions of the project site are located within an Energy/Extractive Area (EX) or Extractive Resource Area (EX 1). The EX combining designation is applied to areas where oil, gas or mineral extraction occurs, is proposed, or where the State Geologist has identified petroleum or mineral reserves of statewide significance; and areas of existing or proposed energy-producing facilities. The EX-1 combining designation is applied to areas, including active mines, 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.

4.6.2 Impact Analysis

a. Methodology and Significance Thresholds

Assessment of impacts is based on: 1) review of site information and conditions; and 2) review of the San Luis Obispo County Safety Element and other County information regarding grading and geologic issues.

Project implementation would create significant impact relative to geologic resources if it would:

1. Result in exposure to or production of unstable earth conditions, such as landslides, earthquakes, liquefaction, ground failure, land subsidence or other similar hazards;
2. Be within a California Geological Survey “Alquist-Priolo” Earthquake Fault Zone, or other known fault zones*;
3. 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;
4. Include structures located on expansive soils;
5. Be inconsistent with the goals and policies of the County’s Safety Element relating to the Geologic and Seismic Hazards; and/or
6. Preclude the future extraction of valuable mineral resources.

*Per Division of Mines and Geology Special Publication #42

b. Project Impacts

Threshold:	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?

Impact GEO-1 **THE PROJECT HAS POTENTIAL TO RESULT IN EXPOSURE TO OR PRODUCTION OF UNSTABLE EARTH CONDITIONS, SUCH AS LANDSLIDES, LIQUEFACTION, AND SECONDARY DEFORMATION. THEREFORE, IMPACTS WOULD BE CLASS II, LESS THAN SIGNIFICANT WITH INCORPORATION OF MITIGATION.**

The project area is situated in an area of moderate seismic activity. As such, development on the site will likely experience moderate to strong ground shaking during the life of the project. The

majority of the project site was found to have a low liquefaction potential. However, areas adjacent to the drainage channel that are underlain by alluvial soils have a high liquefaction potential when ground water is high at the site. The potential for secondary deformation in the development area, which may include fissuring or fracturing, associated with tectonic movement in the near vicinity, is low to moderate. Four landslides were identified in the vicinity of the development. Landslide A, located upslope from the entrance road is a shallow, recently active slide. Landslide B is a shallow, creeping landslide south of Lot 6. Two dormant landslides were also identified: Landslide C is located downslope of Lot 12, and Landslide D is located southwest of lots 12 and 13 (refer to Plate 6, Engineering Geologic Map, of the *Engineering Geologic and Geotechnical Feasibility Investigation* included in Appendix E). Landslide C has potential to impact the proposed roadways included in the project. Earthwork for the access road through areas underlain by alluvium and colluvium will require over-excavation of the surficial soils, excavation of a keyway for the roadway fill, and replacement with engineered fill for this road segment. Based on these geologic conditions, the project has potential to result in exposure to or production of unstable earth conditions, such as landslides, earthquakes, liquefaction, ground failure, land subsidence or other similar hazards. Therefore, impacts would be potentially significant.

Mitigation Measure

GEO-1

a. Design-level Geotechnical Investigation

- Prior to any project grading or construction activities, a design-level geotechnical investigation shall be performed and shall include site-appropriate geotechnical design criteria and construction recommendations for the proposed roadway.
- Following completion of subdivision improvements, a design-level geotechnical engineering investigation shall be performed for each lot. Structures and foundations shall be in conformance with the California Building Code guidelines, and based on geotechnical design criteria provided by the project geotechnical engineer for each lot. A mitigation plan shall be prepared based on potential liquefaction impacts to the affected improvements determined during the design-level geotechnical engineering investigation for the subdivision. Mitigation may involve subexcavation and recompaction of some portion of the alluvial soils underlying the improvements. It is recommended that potential liquefaction impacts on Lot 11 be evaluated as part of design-level geotechnical engineering investigations, and appropriate mitigation measures be developed and incorporated into foundation and building plans prior to the issuance of building permits.

b. Earthquake Ground Shaking Design. The site-specific characteristics of earthquake ground shaking shall be quantified and incorporated into structural design of the site structures, as part of site-specific engineering evaluations for individual lot development. This information shall be included in the project design plans and submitted to the County Department of Planning and Building prior to issuance of building permits.

c. Drainage Improvements. Site development shall incorporate sufficient surface and subsurface drainage improvements. Surface and subsurface water that is intercepted and collected by drainage improvements shall not be allowed to discharge onto, or upslope from, the artificial (cut and fill) slopes or landslide areas. Surface and subsurface drainage improvements shall be submitted to the County Department of Planning and Building prior to issuance of grading permits.

d. Fault Setbacks. In the event that future development is proposed in the fault setback zone, a fault investigation shall be performed to identify and evaluate potential fault rupture hazard impacts on the proposed development. A report summarizing results of the investigation shall be submitted to the County Department of Planning and Building prior to issuance of building permits.

Significance After Mitigation

Mitigation Measure GEO-1 would reduce potential impacts associated with exposure to or production of unstable earth conditions, such as landslides, earthquakes, liquefaction, ground failure, land subsidence or other similar hazards in the project area to a less than significant level.

Threshold:	Would the project be within a California Geological Survey "Alquist-Priolo" Earthquake Fault Zone, or other known fault zones?

Impact GEO-2 THE PROPOSED DEVELOPMENT IS NOT LOCATED WITHIN A DEFINED STATE SPECIAL STUDY ZONE OR COUNTY FAULT ZONE. HOWEVER, FAULT TRACES ASSOCIATED WITH THE EDNA FAULT ZONE AND LOS OSOS FAULT ZONE ARE PRESENT IN THE VICINITY OF THE PROJECT SITE. THEREFORE, IMPACTS WOULD BE CLASS II, LESS THAN SIGNIFICANT WITH INCORPORATION OF MITIGATION.

The State of California regulates development near known active faults through the Alquist-Priolo Special Studies Zone Act. Special Study Zones have been established around known active faults by the California Division of Mines and Geology. The proposed development is not located within a defined State Special Study Zone or County fault zone. As such, the potential for surface fault rupture associated with primary tectonic faulting within the proposed development is low. However, fault traces associated with the Edna fault zone and Los Osos fault zone are present in the vicinity of the project site. The Los Osos fault zone is a southwest-dipping, blind thrust fault that likely projects to near or along the northern front of the San Luis Range. Holocene activity on the local segment of the Los Osos fault zone is unclear. The Edna fault zone is a steep, south-dipping inter-range fault zone that may consist of two traces in the vicinity of the project site. The two traces are the trace of Hall (1973), extending south of the property, and the trace projected from Dibblee (2005, 2006) which coincides with the Tmm-Tpps contact on the site. Because of the structural relationship indicating possible faulting and previous mapping by Dibblee, we interpret the Tmm-Tpps contact on the site to be faulted. Although the fault is likely not to be Holocene-active, it was not investigated by trenching and is in relative close proximity to the proposed development. Therefore, impacts associated with fault rupture would be potentially significant.

Mitigation Measure

GEO-2

The proposed development area shall maintain a fault setback distance of 100 feet upslope and 200 feet downslope from the mapped Edna fault zone contact (Plate 8, Geologic Hazards and Constraints Map, of the *Engineering Geologic and Geotechnical Feasibility Investigation* included in Appendix E of this EIR).

Significance After Mitigation

Mitigation Measure GEO-2 would reduce potential impacts associated with the Edna fault zone and Los Osos fault zone to a less than significant level.

Threshold:	Would the project include structures located on expansive soils?

Impact GEO-3 EXPANSIVE SOIL UNITS MAY UNDERLIE PORTIONS OF THE PROPOSED RESIDENTIAL LOTS. THEREFORE, IMPACTS WOULD BE CLASS II, LESS THAN SIGNIFICANT WITH INCORPORATION OF MITIGATION.

Highly expansive materials generally are not present on the project site. However, some very thin soil horizons in the upper two to four feet of the surficial soils onsite may be expansive. In addition, there is a potential for expansive mudstone units to underlie portions of the proposed development. Therefore, impacts associated with the potential for expansive soils to underlie the proposed residential lots would be potentially significant.

Mitigation Measure

GEO-3

Expansive Soil Testing and Removal. As part of standard stripping operations during grading for the proposed roadway and structures, potentially expansive materials shall be removed from the development area. Mudstone units which underlie portions of the proposed development shall also be tested for expansibility if encountered during site-specific geotechnical engineering investigations. The project geotechnical engineers for individual lot developments shall provide site-specific geotechnical design criteria and construction recommendations based on their independent evaluations.

Significance After Mitigation

Mitigation Measure GEO-3 would avoid adverse effects to the proposed structures due to expansive soils and this potential impact would be reduced to a less than significant level.

Threshold:	Would the project be inconsistent with the goals and policies of the County's Safety Element relating to the Geologic and Seismic Hazards?

Impact GEO-4 THE PROJECT WOULD BE POTENTIALLY INCONSISTENT WITH THE GEOLOGIC AND SEISMIC HAZARDS GOALS AND POLICIES CONTAINED IN THE COUNTY'S SAFETY ELEMENT. THIS IMPACT WOULD BE CLASS II, LESS THAN SIGNIFICANT WITH INCORPORATION OF MITIGATION.

Goal S-5 in Section 5, Geologic & Seismic Hazards, of the County's Safety Element establishes a goal to minimize the potential for loss of life and property resulting for geologic and seismic hazards. The following policies would apply to the project are intended to help achieve this goal:

Policy S-18 Fault Rupture Hazards. 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 Reduce Seismic Hazards. 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 Liquefaction and Seismic Settlement. 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 Slope Instability. 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 that developments on sloping ground use design and construction techniques appropriate for those areas.

The project would be required to comply with all applicable State and local building codes for proper structural design. As such, the project would be consistent with the requirements of County Safety Element Policies S-19 and S-20. However, the project would partially conflict with Policies S-18 and S-20 by locating the proposed residential lots in an area subject to fault rupture and slope instability. Therefore, impacts associated with project inconsistency with the goals and policies of the County's Safety Element relating to the Geologic and Seismic Hazards would be potentially significant.

Mitigation Measure

Mitigation Measure GEO-1 is adapted from the recommendations from the site specific *Engineering Geologic and Geotechnical Feasibility Investigation*. This mitigation measure serves to protect the proposed development from potential fault rupture hazards and slope instability and would, thus, be required to avoid and/or reduce potential impacts associated with project inconsistency with the County's Safety Element goals and policies related to Geologic and Seismic Hazards.

Significance After Mitigation

With implementation of Mitigation Measure GEO-1, the project would be consistent with the applicable County Safety Element goals and policies related to Geologic and Seismic Hazards and impacts would be less than significant.

Threshold:	Would the project preclude the future extraction of valuable mineral resources?

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. THERE WOULD BE NO IMPACT.**

No portion of the project site or adjacent properties are within a County designated Energy or Extractive Area, or Extractive Resource Area. As such, no valuable mineral resources or reserves are known to exist in these areas. Therefore, the project would not preclude the future extraction or in any way result in impacts to such resources.

c. Cumulative Impacts

Geology and soils impacts would be cumulatively considerable if the project, in conjunction with other past, present, and reasonably foreseeable projects, would trigger the above referenced significance thresholds. New development in the County would expose new residents and properties to seismic and other geologic hazards. However, these seismic and soil issues are specific to each project and therefore, for the purposes of this cumulative analysis, the geographic context is site-specific. It is expected that because of the site-specific nature of these issues, each development would be required to address said issues on a case-by-case basis through preparation of required soils and geotechnical engineering studies and adherence to the recommendations therein. Each development would also be required to comply with existing local and state laws and

regulations including the applicable California Building Code standards and requirements. Thus, the combination of the project with other cumulative developments would not have a significant cumulative impact. Furthermore, with adherence to the applicable laws and regulations and mitigation measures, the project's contribution to any cumulative geology and soils impacts would be less than significant.

4.7 Greenhouse Gas Emissions

4.7.1 Setting

The accumulation of greenhouse gases (GHGs) in the atmosphere regulates the earth's temperature. Without the natural heat trapping effect of GHGs, Earth's surface would be about 34 degrees Celsius (°C) cooler (CalEPA 2006). However, emissions from human activities, particularly the consumption of fossil fuels for electricity production and transportation, have elevated the concentration of these gases in the atmosphere beyond the level of naturally occurring concentrations. Carbon dioxide (CO_2), methane (CH_4), and nitrous oxide (N_2O) are the GHGs that are emitted in the greatest quantities from human activities. Emissions of CO_2 are largely by-products of fossil fuel combustion. CH_4 results from fossil fuel combustion as well as off-gassing associated with agricultural practices and landfills. N_2O is produced by microbial processes in soil and water, including those reactions that occur in fertilizers that contain nitrogen, fossil fuel combustion, and other chemical processes.

Scientific modeling predicts that continued GHG emissions at or above current rates would induce more extreme climate changes during the 21st century than were observed during the 20th century. According to the CalEPA's 2010 Climate Action Team Biennial Report, potential impacts of climate change in California may include loss in snow pack, sea level rise, more extreme heat days per year, more high ozone days, more large forest fires, and more drought years (CalEPA 2010). While these potential impacts identify the possible effects of climate change at a global and potentially statewide level, in general scientific modeling tools are currently unable to predict what impacts would occur locally with a similar degree of accuracy.

In response to an increase in man-made GHG concentrations over the past 150 years, California has implemented Assembly Bill (AB) 32, the "California Global Warming Solutions Act of 2006." AB 32 codifies the Statewide goal of reducing GHG emissions to 1990 levels by 2020 (essentially a 15 percent reduction below 2005 emission levels), and requires CARB to prepare a Scoping Plan that outlines the main State strategies for reducing GHGs to meet the 2020 deadline. In addition, AB 32 requires CARB to adopt regulations to require reporting and verification of statewide GHG emissions.

After completing a comprehensive review and update process, CARB approved a 1990 statewide GHG level and 2020 limit of 427 MMT CO_2e. The Scoping Plan was approved by CARB on December 11, 2008, and includes measures to address GHG emission reduction strategies related to energy efficiency, water use, and recycling and solid waste, among other measures. The Scoping Plan includes a range of GHG reduction actions that may include direct regulations, alternative compliance mechanisms, monetary and non-monetary incentives, voluntary actions, and market-based mechanisms.

In May 2014, CARB approved the first update to the AB 32 Scoping Plan. The 2013 Scoping Plan update defines CARB's climate change priorities for the next five years and sets the groundwork to reach post-2020 goals set forth in EO S-3-05. The update highlights California's progress toward meeting the "near-term" 2020 GHG emission reduction goals defined in the original Scoping Plan. It also 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 2017).

Senate Bill (SB) 97, signed in August 2007, acknowledges that climate change is an environmental issue that requires analysis in California Environmental Quality Act (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.

On September 8, 2016, the governor signed SB 32 into law, extending AB 32 by requiring the State to further reduce GHGs to 40 percent below 1990 levels by 2030 (the other provisions of AB 32 remain unchanged). 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 CARB in 2017 (CARB 2015).

For more information on the Senate and Assembly Bills, Executive Orders, and reports discussed above, and to view reports and research referenced above, please refer to the following websites: www.climatechange.ca.gov and www.arb.ca.gov/cc/cc.htm.

Local Regulations

In November 2011, the County of San Luis Obispo adopted its County EnergyWise Plan (Climate Action Plan) for reducing GHG emissions. The EnergyWise Plan is a strategic document, prepared pursuant to the Conservation and Open Space Element of the County General Plan. The EnergyWise Plan outlines the County's approach to achieving its GHG reduction target of 15 percent below baseline levels by 2020, consistent with AB 32.

4.7.2 Impact Analysis

a. Methodology and Significance Thresholds

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

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

The vast majority of individual projects do not generate sufficient GHG emissions to directly influence climate change. However, physical changes caused by a project can contribute incrementally to cumulative effects that are significant, even if individual changes resulting from a project are limited. The issue of climate change typically involves an analysis of whether a project's contribution towards an impact would be cumulatively considerable. "Cumulatively considerable" means that the incremental effects of an individual project are significant when viewed in connection with the effects of past projects, other current projects, and probable future projects (*CEQA Guidelines*, Section 15064[h][1]).

For future projects, the significance of GHG emissions may be evaluated based on locally adopted quantitative thresholds, or consistency with a regional GHG reduction plan (such as a Climate Action Plan).

In March 2012, SLOAPCD adopted CEQA thresholds for GHG emissions in order to achieve goals outlined in AB 32. There are three thresholds that can be used to evaluate the level of significance of GHG emissions impacts for residential and commercial projects. The three thresholds are described below:

- **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 *State CEQA Guidelines*. If a project is consistent with a qualified GHG reduction strategy, it would not have a significant impact; or,
- **Bright-Line Threshold.** A project would have a significant impact if it exceeds the "bright-line threshold" of 1,150 metric tons CO_2e/year; or,
- **Efficiency Threshold.** A project would have a significant impact if the efficiency threshold exceeds 4.9 metric tons of CO_2e/service population/year. The service population is defined as the number of residents plus employees for a given project.

The SLOAPCD "bright-line threshold" was developed to help reach the AB 32 emission reduction targets by attributing an appropriate share of the GHG reductions needed from new land use development projects subject to CEQA. Land use sector projects that comply with this threshold would not be "cumulatively considerable" because they would be helping to solve the cumulative problem as a part of the AB 32 process. Such small sources would not significantly add to global climate change and would not hinder the state's ability to reach the AB 32 goal, even when considered cumulatively. The threshold is intended to assess small and average sized projects, whereas the per-service population guideline is intended to avoid penalizing larger projects that incorporate GHG-reduction measures such that they may have high total annual GHG emissions, but would be relatively efficient, as compared to projects of similar scale. Therefore, the bright-line threshold is the most appropriate threshold for the project, and the project would have a potentially significant contribution to GHG emissions if it would result in emissions in excess of 1,150 metric tons of CO_2e per year.

Calculations of CO_2, CH_4, and N_2O emissions are provided to identify the magnitude of potential project effects. The analysis focuses on CO_2, CH_4, and N_2O because these comprise 98.9 percent of all GHG emissions by volume (IPCC 2007) and are the GHG emissions that the project would emit in the largest quantities. Fluorinated gases, such as HFCs, PFCs, and SF_6, were also considered for the analysis. However, because the project is a small agricultural subdivision, the quantity of fluorinated gases would not be significant since fluorinated gases are primarily associated with industrial processes. Emissions of all GHGs are converted into their equivalent weight in CO_2 (CO_2e). Minimal amounts of other main GHGs (such as chlorofluorocarbons [CFCs]) would be emitted, but these other GHG emissions would not substantially add to the calculated CO_2e amounts. Calculations are based on the methodologies discussed in the California Air Pollution Control Officers Association (CAPCOA) CEQA and Climate Change white paper (January 2008) and include the use of the California Climate Action Registry (CCAR) General Reporting Protocol (January 2009).

GHG emissions associated with the proposed project were calculated using the California Emissions Estimator Model (CalEEMod) version 2016.3.1 (see Appendix C for calculations).

b. Project Impacts

Threshold:	Would the project generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment?

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. THIS IMPACT WOULD BE CLASS III, LESS THAN SIGNIFICANT.

Construction Emissions

Although construction activity is addressed in this analysis, CAPCOA does not discuss whether any of the suggested threshold approaches adequately address impacts from temporary construction activity. As stated in the CEQA and Climate Change white paper, "more study is needed to make this assessment or to develop separate thresholds for construction activity" (CAPCOA 2008). Nevertheless, air pollution control districts such as the SLOAPCD have recommended amortizing construction-related emissions over a 50-year period for residential projects in conjunction with the project's operational emissions.

Construction of the project would generate temporary GHG emissions primarily due to the operation of construction equipment and truck trips. Site preparation and grading typically generate the greatest amount of emissions due to the use of grading equipment and soil hauling. For the project, site grading would involve balanced quantities of cut and fill material. Emissions associated with the construction period were estimated using the California Emissions Estimator Model (CalEEMod) Version 2016.3.1, based on the CalEEMod defaults for the construction schedule and equipment used during project construction. Complete results from CalEEMod and assumptions can be viewed in Appendix C.

As shown in Table 20, construction activity associated with the project would generate an estimated 356 metric tons of CO_2e units. Amortized over a 50-year period (the assumed life of the project), construction of the proposed project would generate approximately 7 metric tons of CO_2e per year.

Table 20 Estimated Construction Emissions of Greenhouse Gases

	Annual Emissions (Carbon Dioxide Equivalent (CO_2e))
Total Estimated Construction Emissions	356 metric tons
Amortized over 50 years	7 metric tons
See Appendix C for CalEEMod Results	

ON-SITE OPERATIONAL EMISSIONS

Operational emissions from project development were also estimated using CalEEMod (see Appendix C for calculations). Operational impacts include emissions from energy and natural gas; area sources including consumer products landscape maintenance, and architectural coatings; waste generations; water and wastewater usage; and mobile combustion.

DIRECT EMISSIONS FROM MOBILE COMBUSTION

Emissions from vehicles driving to and from the site were based on the Traffic and Circulation Study conducted by the Associated Transportation Engineers (2017). Emissions of CO_2 and CH_4 from

transportation sources were quantified using CalEEMod. Because CalEEMod does not calculate N_2O emissions from mobile sources, N_2O emissions were quantified using the CCAR General Reporting Protocol (January 2009) direct emissions factors for mobile combustion (refer to Appendix C for calculations). Emission rates for N_2O emissions were based on the vehicle mix output generated by CalEEMod and the emission factors found in the CCAR General Reporting Protocol.

COMBINED ANNUAL CONSTRUCTION, OPERATIONAL, AND MOBILE GHG EMISSIONS

Table 21 combines the construction and operational GHG emissions associated with development for the project. As described above, emissions associated with construction activity (approximately 356 metric tons CO_2e) are amortized over 50 years (the anticipated lifetime of the project).

Table 21 Combined Annual Emissions of Greenhouse Gases

Emission Source	Annual Emissions
Construction	7 metric tons CO_2e
Operational	
Area	0.3 metric tons CO_2e
Energy	58 metric tons CO_2e
Solid Waste	7.6 metric tons CO_2e
Water	3 metric tons CO_2e
Mobile	
From CO_2 and CH_4	201.2 metric tons CO_2e
From N_2O	10.9 metric tons CO_2e
Total	**288 metric tons CO_2e**
Threshold	1,150 metric tons CO_2e
Threshold Exceeded?	No

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

As shown in Table 21, the combined annual emissions would total approximately 288 metric tons per year of CO_2e. These emissions do not exceed the applicable SLOAPCD threshold of 1,150 metric tons per year of CO_2e and do not exceed the 690 metric tons of CO_2e per year threshold for compliance with SB 32 (SLOAPCD's AB 32 threshold reduced by 40 percent). Therefore, the project would not generate GHG emissions that would result in adverse effects on the environment and this impact would be less than significant.

Threshold:	Would the project conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of greenhouse gases?

Impact GHG-2 THE PROJECT WOULD BE CONSISTENT WITH APPLICABLE PROGRAMS AND MEASURES IN THE COUNTY'S ENERGYWISE PLAN, DESIGNED TO REDUCE GHG EMISSIONS. THEREFORE, THIS IMPACT WOULD BE CLASS III, LESS THAN SIGNIFICANT.

Climate Action Plan Consistency

In November 2011, the County of San Luis Obispo adopted its County EnergyWise Plan (Climate Action Plan) for reducing greenhouse gas emissions consistent with the *CEQA Guidelines*. The GHG-reducing policy provisions contained in the EnergyWise Plan were prepared with the purpose of

complying with the requirements of AB 32 and achieving the goals of the AB 32 Scoping Plan. As a result, the EnergyWise Plan is consistent with statewide efforts established in ARB's Climate Change Scoping Plan to reduce statewide GHG emissions to 1990 levels by 2020.

The EnergyWise Plan includes 39 GHG emissions reduction measures related to energy conservation, renewable energy, solid waste, land use and transportation, water conservation, and agriculture. These GHG reduction measures are primarily actions to be undertaken by the County, including:

- Developing energy conservation campaigns and new financing programs for energy efficiency;
- Incentivizing new development to exceed minimum California Green Building Code (CalGreen) energy efficiency requirements;
- Developing new large-scale renewable energy facilities, and developing a strategy to encourage commercial- and other small-scale renewable energy installations;
- Providing expanded resources and opportunities for recycling, implementing a composting program;
- Implementing stricter requirements for construction and demolition waste recycling;
- Increasing the amount of affordable housing provided in the County;
- Removing barriers to community-wide pedestrian and bicycle networks;
- Reducing County parking requirements and unbundling parking and property costs;
- Expanding the availability of alternative and low-carbon fuels;
- Requiring developers to reduce potable water use in new buildings and implementing tiered water rate structures; and
- Encouraging installation of greywater and rainwater harvesting systems.

The GHG reduction measures included in the EnergyWise Plan do not include policies or implementation measures that would be implemented directly by developers, and the project does not include any land use changes or other components that would conflict with the implementation of the EnergyWise Plan by the County.

The project would also be required to comply with existing State regulations, which include increased energy conservation measures and other actions adopted to achieve the overall GHG emissions reduction goals identified in AB 32.

SENATE BILL 32

In late 2015, the California Supreme Court's Newhall Ranch decision confirmed that there are multiple potential pathways for evaluating GHG emissions consistent with CEQA, depending on the circumstances of a given project (Center for Biological Diversity v. Department of Fish and Wildlife (2015) 62 Cal. 4th 204). The decision also identified the need to analyze both near term and post-2020 emissions, as applicable, stating that an "EIR taking a goal-consistency approach to CEQA significance may in the near future need to consider the project's effects on meeting longer term emissions reduction targets." While not legally binding on local land use agencies, SB 32 extends the statewide AB 32 reduction goal, requiring the State to further reduce GHGs to 40 percent below 1990 levels by 2030, and Executive Order S-03-05 has set forth a long-term reduction target to reduce GHG emissions in California by 80 percent below 1990 level by the year 2050.

While the State has adopted the AB 32 Scoping Plan and multiple regulations to achieve the AB 32 year 2020 target, there is no currently adopted State plan to meet post-2020 GHG reduction goals. CARB is currently working to update the Scoping Plan to provide a framework for achieving the 2030 target set forth by SB 32 (ARB, 2015). As a result, State reduction strategies cannot be applied to the project to achieve long-term reductions. Achieving these long-term GHG reduction policies will require State and federal plans and policies for achieving post-2020 reduction goals. Placing the entire burden of meeting long-term reduction targets on local government or individual new development projects would be disproportionate and likely ineffective.

Given the recent legislative attention and judicial action regarding post-2020 goals and the scientific evidence that additional GHG reductions are needed through the year 2050, the Association of Environmental Professionals' (AEP) Climate Change Committee published a white paper in 2015 recommending that CEQA analyses for most land use development projects may continue to rely on current adopted thresholds for the immediate future (AEP, 2015). As such, for the GHG impacts resulting from development under the project, this analysis evaluates future conditions in the year 2020 based on consistency with the City's adopted Climate Action Plan.

The project would be consistent with applicable plans and programs designed to reduce GHG emissions in the County's EnergyWise Plan. Impacts resulting from GHG emissions generated by the project would be less than significant.

c. Cumulative Impacts

Table 6 in Section 3.0, *Environmental Setting*, lists potential future development within the vicinity of the project site. Such development would increase overall GHG emissions generated within the County. Analyses of GHG emissions and climate change are cumulative in nature, as they affect the accumulation of GHGs in the atmosphere. Projects that exceed the thresholds discussed above would have a significant impact on GHG emissions and climate change, both individually and cumulatively. As indicated in Impact GHG-1, GHG emissions associated with the project would be less than significant. As a result, the project's contribution to cumulative levels of GHGs would not be cumulatively considerable and cumulative impacts to climate change would be less than significant.

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4.8 Hazards and Hazardous Materials

4.8.1 Setting

a. Agricultural Uses

The existing land use categories on the approximately 299-acre project site include Agriculture (225 acres) and Rural Lands (74 acres). The northern portion of the project site within the Agriculture land use category includes approximately 145 acres of existing vineyards. Upon project implementation, vineyard operation would be expanded on the site resulting in approximately 163 acres of the 299-acre property in use as active vineyards. Due to the current and historic use of the site for agricultural production, hazardous chemicals may be used on the project site. The dryland farming of vineyards typically include the use of a variety of chemical herbicides, pesticides, and nutrients for weed, rodent, and mold or mildew control.

b. Airport Safety Hazards

The project site is located approximately one mile south of the San Luis Obispo County Regional Airport. The project is within the County's Airport Review Area (AR) combining designation. The AR combining designation is used to recognize and minimize the potential conflict between new development around the airport and the ability of aircraft to safely and efficiently maneuver to and from the airport. This includes additional standards relating to limiting structure/vegetation heights as well as avoiding airport operations conflicts.

The *Airport Land Use Plan for the San Luis Obispo County Regional Airport* (ALUP; Airport Land Use Commission of San Luis Obispo County 2005) provides guidance for and limitations to the type of development within the AR combining designation. The site is located in ALUP Aviation Safety Area S-2, which covers areas where aircraft operations occur at altitudes between 501 and 1000 feet above ground level. According to the ALUP (2005), aviation safety hazards in Safety Area S-2 include mechanical failures, fuel exhaustion, loss of control during turns from downwind to base legs or from base to final legs of the traffic pattern, stall/spin incidents during engine-out maneuvers in twin engine aircraft, and midair collisions. However, because aircraft in Area S-2 are at greater altitude and are less densely concentrated than in other portions of the Airport Planning Area, the overall level of aviation safety risk is considered to be lower than that in Safety Area S-1 or the Runway Protection Zones. According to the ALUP, the maximum allowable density of residential development in Safety Area S-2 is six dwelling units per acre. The existing and proposed on-site vineyard uses are an allowed use in Safety Area S-2. The proposed single-family residential uses are also an allowable use in the Safety Area S-2, provided that the maximum density of residential development or use is limited pursuant to the provisions of the ALUP.

The project site is also within the ALUP's Horizontal Airport Imaginary Surface, as established under Section 77.19 of the Federal Aviation Regulations. The Horizontal surface is defined as a horizontal plane 150 feet above the established airport elevation. Obstructions to air navigation are any existing or future objects which are or are expected to be greater than 200 feet above ground level or above mean sea level, whichever is greater; or, the surface of a takeoff and landing area or any imaginary surface. The proposed development would include one- and two-story residential units with a maximum height of 24 feet which would be well under 200 feet above ground level and would not extend into the Horizontal Airport Imaginary Surface.

c. Wildfire

Fire protection services in the project area will be provided by the California Department of Forestry and Fire Protection (CAL FIRE)/San Luis Obispo County Fire Department. According to the San Luis Obispo County Natural Hazard Disclosure (Fire) map, the project site is in a "wildland area that may contain substantial forest fire risks and hazards." According to CAL FIRE's Fire Hazard Severity Zones in SRA map, the project would be located within a 'Moderate' Fire Hazard Severity Zone in State Responsibility Area. Refer to Section 4.10, *Public Services*, for a detailed discussion of project impacts to fire protection services and facilities.

d. Hazardous Materials Sites

The following databases were searched in January 2017 for records relating to any known hazardous materials contamination within the project site.

- Comprehensive Environmental Response, Compensation, and Liability Information System (CERCLIS) database
- Geotracker search for leaking underground fuel tanks
- Department of Toxic Substances Control's Envirostor database
- State Water Resources Control Board (SWRCB) solid waste disposal sites, active Cease and Desist Orders (CDOs), and Cleanup and Abatement Orders (CAOs)
- Cortese list

The search of the SWRBC Geotracker database identified the vineyard operations on the project site with an "Enrolled" program status in the Irrigated Lands Regulatory Program (ILRP). The ILRP regulates discharges from irrigated agricultural lands to prevent agricultural discharges from impairing the waters that receive these discharges. This is done by issuing waste discharge requirements (WDRs) or conditional waivers of WDRs (Orders) to growers. These Orders contain conditions requiring water quality monitoring of receiving waters and corrective actions when impairments are found.

No other sites within the project site were identified, relative to any known hazardous materials contamination.

e. Regulatory Setting

The management of hazardous materials and hazardous wastes is regulated at federal, State, and local levels, including through programs administered by the U.S. EPA; agencies within the California Environmental Protection Agency (CalEPA), such as the Department of Toxic Substances Control (DTSC); federal and State occupational safety agencies; and the San Luis Obispo County Environmental Health Services. Regulations pertaining to flood hazards are further discussed in Section 4.13, *Water and Hydrology.*

f. Definition of Hazardous Materials

A material is considered hazardous if it appears on a list of hazardous materials prepared by a federal, state, or local agency, or if it has characteristics defined as hazardous by such an agency. A hazardous material is defined in Title 22 of the California Code of Regulations as follows:

> "A substance or combination of substances which, because of its quantity, concentration, or physical, chemical or infectious characteristics, may either (1) cause, or significantly contribute

> to, an increase in mortality or an increase in serious irreversible, or incapacitating reversible, illness; or (2) pose a substantial present or potential hazard to human health or environment when improperly treated, stored, transported or disposed of or otherwise managed." (California Code of Regulations, Title 22, Section 66261.10)

Chemical and physical properties cause a substance to be considered hazardous. Such properties include toxicity, ignitability, corrosiveness, and reactivity. California Code of Regulations, Title 22, Sections 66261.20 through 66261.24 defines the aforementioned properties. The release of hazardous materials into the environment can contaminate soils, surface water, and groundwater supplies.

Federal

The Federal Toxic Substances Control Act (1976) and the Resource Conservation and Recovery Act of 1976 (RCRA) established a program administered by the U.S. EPA for the regulation of the generation, transportation, treatment, storage, and disposal of hazardous waste. RCRA was amended in 1984 by the Hazardous and Solid Waste Act (HSWA), which affirmed and extended the "cradle to grave" system of regulating hazardous wastes. Among other things, the use of certain techniques for the disposal of some hazardous wastes was specifically prohibited by HSWA.

The Comprehensive Environmental Response, Compensation and Liability Act (CERCLA) was enacted in 1980 and amended by the Superfund Amendments and Reauthorization Act (SARA) in 1986. This law provides broad federal authority to respond directly to releases or threatened releases of hazardous substances that may endanger public health or the environment. Among other things, CERCLA established requirements concerning closed and abandoned hazardous waste sites, provided for liability of persons responsible for releases of hazardous waste at these sites, and established a trust fund to provide for cleanup when no responsible party could be identified. CERCLA also enabled revision of the National Contingency Plan (NCP), which provided the guidelines and procedures needed to respond to releases and threatened releases of hazardous substances, pollutants, or contaminants. The NCP also established the National Priorities List (NPL).

State

The Department of Toxic Substances Control (DTSC), a department of the California EPA, is the primary agency in California that regulates hazardous waste, cleans up existing contamination, and looks for ways to reduce the hazardous waste produced in California. DTSC regulates hazardous waste in California primarily under the authority of RCRA and the California Health and Safety Code.

DTSC also administers the California Hazardous Waste Control Law (HWCL) to regulate hazardous wastes. While the HWCL is generally more stringent than RCRA, until the U.S. EPA approves the California program, both state and federal laws apply in California. The HWCL lists 791 chemicals and approximately 300 common materials that may be hazardous; establishes criteria for identifying, packaging, and labeling hazardous wastes; prescribes management controls; establishes permit requirements for treatment, storage, disposal, and transportation; and identifies some wastes that cannot be disposed of in landfills.

Government Code Section 65962.5 requires the DTSC, the State Department of Health Services, the SWRCB, and CalRecycle to compile and annually update lists of hazardous waste sites and land designated as hazardous waste sites throughout the state. The Secretary for Environmental Protection consolidates the information submitted by these agencies and distributes it to each city and county where sites on the lists are located. Before the lead agency accepts an application for

any development project as complete, the applicant must consult these lists to determine if the site at issue is included.

If any soil is excavated from a site containing hazardous materials, it would be considered a hazardous waste if it exceeded specific criteria in Title 22 of the California Code of Regulations. Remediation of hazardous wastes found at a site may be required if excavation of these materials is performed, or if certain other soil disturbing activities would occur. Even if soil or groundwater at a contaminated site does not have the characteristics required to be defined as hazardous waste, remediation of the site may be required by regulatory agencies subject to jurisdictional authority. Cleanup requirements are determined on a case-by-case basis by the agency taking jurisdiction.

The State of California Food and Agricultural Code regulates the use of pesticides. Section 12972 requires that the use of pesticides not result in substantial drift to non-target areas. Section 12977 empowers the Agricultural Commissioner to enforce this provision. In addition, Section 12982 states that the local health officer shall investigate any health hazard from pesticide use and take necessary action, in cooperation with the Agricultural Commissioner, to abate the hazard. California Code of Regulations, Title 3, Section 6614 restricts pesticide application when there is a reasonable possibility of: substantial drift to non-target areas; contamination of the bodies or clothing of persons not involved in the application process; damage to non-target crops, animals or other public or private property; or contamination of public or private property, including the creation of a health hazard that prevents normal usage of that property.

Local

San Luis Obispo County General Plan. The County of San Luis Obispo has incorporated planning policies in the General Plan that are relevant to assessing and analyzing hazards within the County. The Land Use Element, Open Space and Conservation Element, and Safety Element include strategic goals and policies for addressing issues related to hazards and hazardous materials in the County and study area.

The San Luis Obispo County Emergency Operations Plan (EOP) addresses the planned response to extraordinary emergency situations associated with natural disasters, technological incidents, and national security emergencies in or affecting San Luis Obispo County. A key intent of the County's EOP is to explain how overall emergency management is coordinated countywide, to address concerns related to continuity of government for the County of San Luis Obispo, and related emergency management issues. The EOP is also intended to serve as a policy and planning reference.

4.8.2 Impact Analysis

a. Methodology and Significance Thresholds

The following criteria are based on Appendix G of the *State 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 ¼-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/or
9. Be within an area classified as a 'state responsibility' area as defined by CalFire.

The project site is not located within ¼-mile of an existing or proposed school. As such, the project would not result in any potential impacts associated with hazardous emissions or handling or hazardous or acutely hazardous materials, substances, or waste within ¼-mile of a school and this issue is not discussed further herein. Refer to the Initial Study in Appendix A for a discussion of this issue.

b. Project Impacts

Threshold:	Would the project create a hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?
Threshold:	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?

Impact HAZ-1 **DUE TO THE PRESENCE OF CURRENT AND HISTORIC AGRICULTURAL PRACTICES ON THE MAJORITY OF THE PROJECT SITE, ON-SITE SOILS MAY CONTAIN CONTAMINANTS THAT COULD POSE A RISK TO HEALTH. IMPACTS RELATED TO EXPOSURE TO RESIDUAL CHEMICALS ON THE PROJECT SITE WOULD BE CLASS II, LESS THAN SIGNIFICANT WITH INCORPORATION OF MITIGATION.**

Due to the presence of current and historic agricultural practices on the majority of the project site, the potential exists for the presence of undocumented residual quantities of presently-banned agricultural chemicals. Additionally, the current use and storage of agricultural chemicals on the site could result in releases of contaminants that could cause adverse health effects. The proposed residential units would be developed as near as 200 feet from the areas of historic and existing agricultural operations on the site. As such, future residents, occupants, and construction/maintenance workers could be exposed to residual agricultural chemicals in on-site soils. Ground disturbing activities during construction near vineyard uses would result in the greatest potential threat because contaminants could be spread via dust particulates. Improper handling and disposal of contaminated soils could result in a health risk to people. Therefore, impacts associated with hazardous materials from agricultural operations would be potentially significant.

Mitigation Measure

HAZ-1

Phase II Soil Sampling. Soil samples shall be taken within the development area on project site by a qualified hazardous materials specialist to determine the presence or absence of pesticides. If soil sampling indicates the presence of any contaminant in hazardous quantities, the RWQCB and DTSC will be contacted to determine the level of any necessary remediation efforts, and these soils shall be remediated in compliance with applicable laws. The project applicant would be required to comply with applicable local, state, and federal requirements regarding site assessment, soils evaluation, and remediation in areas where soil contamination is known or suspected to occur. Site assessments that result in the need for soil excavation would be required to include: an assessment of air impacts and health impacts associated with excavation activities; identification of any applicable local standards that may be exceeded by the excavation activities, including dust levels and noise; transportation impacts from the removal or remedial activities; and control and cleanup measures should an accident occur at the site.

Disclosure of Potential Hazards. All pertinent information collected by the above mentioned study shall be conveyed to future residents and construction/maintenance workers via signage. This signage shall display warnings informing the public as to the chemicals occasionally and frequency used. Signage shall be installed in a readily visible location prior to the initiation of construction activities and shall be maintained throughout construction. The information shall be updated when necessary.

In accordance with the County Right to Farm Ordinance (No. 2050), upon the transfer of real property on the project site, the transferor shall deliver to the prospective transferee a written disclosure statement that shall make all prospective homeowners in the proposed subdivision aware that although potential impacts or discomforts between agricultural and non-agricultural uses may be lessened by proper maintenance, some level of incompatibility between the two uses would remain. This notification shall include disclosure of potential nuisances associated with on-site agricultural uses, including the frequency, type, and technique for pesticide spraying, frequency of noise-making bird control devices, dust, and any other vineyard practices that may present potential health and safety effects. In addition, comprehensive supplemental notification information regarding vineyard operations shall be provided to prospective homeowners prior to property transfer, based on consultation with the San Luis Obispo County Department of Agriculture/Weights and Measures. Should vineyard maintenance practices change substantially (e.g., through the use of new agricultural chemicals or application techniques), notification shall be provided to existing and prospective project residents.

Notice of Intent to Spray. A communication system shall be established at the time of approval of building occupancy by the County to convey to future residents any notices of intent to spray chemicals. A notice of intent to spray shall be sent to residents no less than two weeks prior to application. Future residents can then take appropriate action.

The applicant shall ensure that the County Department of Agriculture/Weights and Measures is informed prior to the application of hazardous chemicals on adjacent agricultural lands. The County Department of Agriculture/Weights and Measures shall be informed no less than two weeks prior to application in order to provide enough time to post disclosure information throughout the proposed residential development.

Security Measures. In areas nearest to the on-site vineyards, the proposed residential development shall incorporate security measures to discourage trespassing onto agricultural lands. Security measures could include, but would not be limited to, fencing, signage, and landscaping such that public access can be limited during times that spraying or other hazardous agricultural operations occur. Security measures shall be included on project design plans and submitted to the County Department of Planning and Building prior to approval of building occupancy.

Significance After Mitigation

Implementation of Mitigation Measure HAZ-1 would reduce potential impacts associated with on-site hazardous materials to a less than significant level.

Threshold:	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?

Impact HAZ-2 NO SITES WERE IDENTIFIED IN THE SEARCH OF HAZARDOUS MATERIAL/WASTE SITES COMPILED PURSUANT TO GOV'T CODE 65962.5 ("CORTESE LIST") THAT WOULD RESULT IN AN ADVERSE IMPACT TO PUBLIC HEALTH CONDITION. THIS IMPACT WOULD BE CLASS III, LESS THAN SIGNIFICANT.

The search of the SWRBC Geotracker database identified the vineyard operations on the project site with an "Enrolled" program status in the Irrigated Lands Regulatory Program (ILRP). Enrollment in this program ensures that discharges from the on-site irrigated agricultural lands would not result in any impairment to local waters. No other hazardous materials/waste sites were identifies within the project site. Therefore, impacts associated with such site would be less than significant.

Threshold:	Would the project impair implementation or physically interfere with an adopted emergency response or evacuation plan?

Impact HAZ-3 THE PROJECT WOULD NOT IMPAIR IMPLEMENTATION OR PHYSICALLY INTERFERE WITH THE COUNTY'S EMERGENCY OPERATIONS PLAN. THEREFORE, THIS IMPACT WOULD BE CLASS III, LESS THAN SIGNIFICANT.

The project site is currently accessed for on-site agricultural operations via Ketzel Lane off of Los Ranchos Road near the intersection of Los Ranchos Road and SR 227. In addition to the proposed primary access for the proposed development via Greystone Place, the project would include two emergency access routes. Upon project development, Ketzel Lane would serve as one of the emergency access points for the proposed development. A second emergency access would be provided through an existing farm road easement located across from the terminus of Hacienda Avenue at Caballeros Avenue in the Rolling Hills subdivision north of the project site. In addition to provision of two emergency access routes, all proposed residential development and associated infrastructure would be developed to local and State standards accounting for potential risks in the project area. Therefore, the project would not impair implementation of or physically interfere with the County's Emergency Operations Plan and this potential impact would be less than significant.

Threshold:	If within the Airport Review designation, or near a private airstrip, would the project result in a safety hazard for people residing or working in the project area?

Impact HAZ-4 THE PROPOSED RESIDENTIAL UNITS WOULD NOT EXTEND INTO THE HORIZONTAL AIRPORT IMAGINARY SURFACE AND, THUS, WOULD NOT CREATE AN OBSTRUCTION TO AIR NAVIGATION. THE PROJECT WOULD ALSO BE DEVELOPED IN COMPLIANCE WITH THE STANDARDS IN THE ALUP FOR THE AIRPORT AND SUBJECT TO THE CONDITIONS OF APPROVAL DETAILED IN THE AIRPORT LAND USE COMMISSION CONSISTENCY DETERMINATION LETTER. THEREFORE, THE PROJECT WOULD NOT RESULT IN A SAFETY HAZARD ASSOCIATED WITH THE SAN LUIS OBISPO COUNTY REGIONAL AIRPORT FOR PEOPLE RESIDING OR WORKING IN THE PROJECT AREA AND THIS IMPACT WOULD BE CLASS III, LESS THAN SIGNIFICANT.

The project site is located approximately one mile south of the San Luis Obispo County Regional Airport. The project is within the County's Airport Review (AR) combining designation and within ALUP Airport Safety Area S-2. According to the ALUP, aircraft in Area S-2 are at greater altitude and are less densely concentrated than in other portions of the Airport Planning Area. As such, the overall level of aviation safety risk is considered to be lower than that in Safety Area S-1 or the Runway Protection Zones. The maximum density of residential development in Safety Area S-2 is six dwelling units per acre. The existing and proposed on-site vineyard uses are an allowed use in Safety Area S-2. The proposed single-family residential uses are also an allowable use in the Safety Area S-2, provided that the maximum density of residential development or use is limited pursuant to the provisions of the ALUP. The project includes development of 13 residential units on approximately the 299 acre project site. As such, the proposed residential development density would be 0.04 dwelling units per acre and, thus, much lower than the maximum density allowed within ALUP Airport Safety Area S-2.

The project site is also within the ALUP's Horizontal Airport Imaginary Surface, as established under Section 77.19 of the Federal Aviation Regulations. Obstructions to air navigation are any existing or future objects which are or are expected to be greater than 200 feet above ground level or above mean sea level, whichever is greater; or, the surface of a takeoff and landing area or any imaginary surface. The proposed development would include one- and two-story residential units with a maximum height of 24 feet, in compliance with the visual analysis assumptions and height restriction agreed to by the applicant. This height limit would be in compliance Section 22.10.090.C of the County's Land Use Ordinance. As such, the proposed development would not extend into the Horizontal Airport Imaginary Surface and, thus, would not create an obstruction to air navigation. Although the project would occur within an airport review area, it would be developed in compliance with the standards in the ALUP for the airport.

Additionally, in February 2017, the San Luis Obispo County Airport Land Use Commission submitted findings in response to a referral by the County for a determination of project consistency or inconsistency relative to the airport (refer to Appendix F). As detailed therein, the Airport Land Use Commission recommends a determination of consistency for the project relative to the nearby airport and airport operations. The findings of the Airport Land Use Commission relative to airport hazards and safety are summarized as follows:

- The project is consistent with ALUP General Land Use Policies G-1 through G-3 because all information required for review of the proposed local action was provided by the referring agency and the project would not result in any incompatibilities to the continued economic vitality and efficient operation of the Airport;
- The project is consistent with the ALUP Specific Land Use Policies for Safety because the proposed development would not result in a density or building coverage greater that

permitted in Table 7 of the ALUP, and the proposed development would not result in high intensity land uses or special land use functions;

- The project is consistent with the ALUP Specific Land Use Policies for Airspace Protection because the proposed development shall not include any structure, landscaping, glare, apparatus, or other feature to constitute an obstruction or a hazard to air navigation.
- The project is consistent with the ALUP Specific Land Use Policies for Overflight because the proposed development shall record avigation easements for each proposed property prior to the issuance of any building or minor use permit, and all owners, potential purchasers, occupants, and potential occupants must receive full and accurate disclosure concerning the noise, safety, or overflight impacts associated with airport operations prior to entering any contractual obligation to purchase, lease, rent, or otherwise occupy any property or properties within the Airport Area; and
- The proposed development will not exceed the maximum building coverage nor increase densities greater than what is allowed per Table 7 of the ALUP, because the square footage of the space and maximum number of people per acre do not surpass the requirements set by the ALUP.

The project would also be subject to the Conditions of Approval detailed in the Airport Land Use Commission consistency determination letter which would serve to avoid any potential hazards associated with the airport (refer to Appendix F).

Therefore, the project would not result in a safety hazard associated with the airport and this potential impact would be less than significant.

Threshold:	Would the project increase fire hazard risk or expose people or structures to high wildland fire hazard conditions?
Threshold:	Would the project be within a 'very high' fire hazard severity zone?
Threshold:	Would the project be within an area classified as a 'state responsibility' area as defined by CalFire?

Impact HAZ-5 **THE PROJECT WOULD BE LOCATED IN A STATE RESPONSIBILITY AREA WITHIN A WILDLAND AREA WITH POTENTIAL FOR FOREST FIRES. HOWEVER, THE PROJECT WOULD INCLUDE ADEQUATE EMERGENCY ACCESS AND FIRE SAFETY COMPONENTS TO AVOID IMPACTS ASSOCIATED WITH WILDLAND FIRE RISK TO FUTURE ON-SITE PEOPLE AND STRUCTURES. THIS IMPACT WOULD BE CLASS III, LESS THAN SIGNIFICANT.**

According to the San Luis Obispo County Natural Hazard Disclosure (Fire) map, the project site is in a "wildland area that may contain substantial forest fire risks and hazards." According to CAL FIRE's Fire Hazard Severity Zones in SRA map, the project would be located within a 'Moderate' Fire Hazard Severity Zone in State Responsibility Area. According to CAL FIRE's Very High Fire Hazard Severity Zones in LRA map, the project is located in a designated 'Non-Very High Fire Hazard Severity Zone.' Although the project is not located within a 'Very High' Hazard Severity Zone, the project site is located is a wildland area with potential for forest fires. As such, the proposed development would expose the proposed residential structures and future habitants to wildland fire hazard conditions. However, the project would include the provision of adequate emergency access routes and landscaping buffers around the perimeters of the proposed residential units. Furthermore, fire hydrants would be installed in accordance with County standards and CAL

FIRE/San Luis Obispo County Fire Department requirements. Therefore, impacts associated with the risk of wildland fire to people and/or structures on the project site would be less than significant.

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 developments 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. In addition, adherence to applicable General Plan policies and applicable State and federal regulatory requirements would reduce any cumulative hazards and hazardous materials impacts resulting from buildout of the unincorporated areas of the County under the General Plan to a less than significant level. Therefore, cumulative impacts related to hazards and hazardous materials would be less than significant.

4.9 Noise

4.9.1 Setting

a. Overview of Sound Measurement

Sound is described in terms of the loudness (amplitude) and frequency (pitch) of the sound. Noise is typically defined as unwanted sound that interferes with normal activities or otherwise diminishes the quality of the environment. Prolonged exposure to high levels of noise is known to have several adverse effects on people, including hearing loss, communication interference, sleep interference, physiological responses, and annoyance. The noise environment typically includes background noise generated from both near and distant noise sources as well as the sound from individual local sources. These can vary from an occasional aircraft or train passing by to continuous noise from sources such as traffic on a major road.

The standard unit of measurement of the loudness of sound is the decibel (dB). Since the human ear is not equally sensitive to sound at all frequencies, a special frequency-dependent rating scale has been devised to relate noise to human sensitivity. The A-weighted decibel scale (dBA) is an adjustment to the actual sound pressure 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).

To account for the variations in loudness associated with many noise sources, several descriptors or metrics have been developed. One of the most frequently used noise metrics of this type 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 measured or computed for a one-hour period, but longer or shorter periods may be specified. For any Leq value, the time period must be specified or clearly understood.

The sound pressure level 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). Decibels are summed on a logarithmic basis. 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 would result in a negligible increase (less than 0.5 dB) in total ambient sound levels. In terms of human response to noise, studies have indicated that a noise level increase of 3 dBA is barely perceptible to most people, a 5 dBA increase is readily noticeable, and a difference of 10 dBA would be perceived as a doubling of loudness. Quiet suburban areas typically have noise levels in the range of 40 to 50 dBA, while those along arterial streets are in the 50 to 60+ dBA range. Normal conversational levels are in the 60-65 dBA range and ambient noise levels greater than that can interrupt conversations.

Noise levels from stationary or point sources (such as construction equipment and industrial machinery) typically attenuate at a rate of 6 to 7.5 dB per doubling of distance over acoustically hard and soft locations, respectively. Noise from lightly traveled roads typically attenuates at a rate of about 4.5 dB per doubling of distance, while noise from heavily traveled roads typically attenuates at about 3 dB per doubling of distance. Noise levels are also reduced by intervening structures, such as building or, walls (typically referred to as “transmission loss”). Generally, a single

row of buildings between the receptor and the noise source reduces the noise level by about 5 dBA, while a solid wall or earthen berm that breaks the line-of-sight reduces noise levels by 5 to 10 dBA.

The Federal Highway Administration (FHWA) *Highway Traffic Noise: Analysis and Abatement Guidance* (FHWA 2011:Table 6) indicates that the building noise reduction values typically range from 10-25 dBA. Standard construction materials and techniques used for residential developments in Southern California (conventional wood frame construction consistent with current California energy conservation requirements) normally result in a minimum exterior-to-interior noise attenuation of 15 dBA with windows open and 20 dBA with windows closed.

The 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 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 PM and 7:00 AM to account for the general increased sensitivity of people to nighttime noise levels. The Community Noise Equivalent Level (CNEL) is similar to the Ldn with one exception. The CNEL adds 5 dB to evening noise levels (7:00 PM to 10:00 PM). 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.

Additional background information regarding noise is presented in the San Luis Obispo County General Plan Noise Element (San Luis Obispo County May 1992:Sections 104-1.5).

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 is in the Federal Transit Authority report *Transit Noise and Vibration Impact Assessment* (FTA 2006:Section 7.1).

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 2006:Figure 7-3).

c. Existing Noise Environment

Major sources of noise in the County identified in the General Plan Noise Element include: roadways, airports, railroads, and stationary sources such as agricultural operations, construction, and commercial and industrial plants. The existing sources of anticipated noise specific to the proposed project include noise generated from the traffic along State Route 227 (SR 227), adjacent agriculture operations, and noise from airport operations.

The project site is located about one mile southwest of SR 227, and one mile southeast of the San Luis Obispo County Regional Airport. The County General Plan *Noise Element* noise contour maps

show that the 60 dBA Ldn or CNEL contour extends about 209 feet from the CL of SR 227 (San Luis Obispo County May, 1992: Appendix A, Section Z-35 for the Los Ranchos/Edna Area). The nearest lots in the proposed project (lots 7, 8, and 9) are over 5,000 feet from SR 227.

The *Airport Land Use Plan for the San Luis Obispo County Regional Airport* shows that all of the proposed residential lots would be well outside (by over 1,000 feet) of the 50 dBA CNEL contour associated with operations at the San Luis Obispo Regional Airport (San Luis Obispo County 2005:Figure 1). This plan is described more in the regulatory setting below.

Ambient noise measurements were taken on the project site in 2005 during work on an earlier development proposal. In 2017, Rincon Consultants, Inc. collected new ambient noise measurements in the general project vicinity near SR 227. Figure 19 shows the measurement locations, and Table 22 summarizes the measurement results. The 2017 measurement data are included in Appendix G. For the 2005 measurements, local traffic on Greystone Place adjacent to the project site was the dominant noise source. Distant traffic on SR 227 and occasional aircraft operations also contributed to the measured noise levels. For the 2017 noise measurements, traffic on SR 227 was the dominant noise source. As expected based on the County *Noise Element* noise contours, the only measurement that was above 60 dBA was adjacent to SR 227 (Location 2017-2).

Table 22 Noise Measurement Results

Meas. No.	Location	Distance from SR 227 (feet)	Measured Leq (dBA)	Model Daytime Leq (dBA)
2005 – 1	Onsite, between proposed new vineyard and stormwater pond	5,000	51.5	52.0
2005 – 2	Onsite, approx. center of proposed Lot 3	5,700	47.4	51.4
2005 – 3	Onsite, along access drive near Lot 10	5,600	47.3	51.5
2017 – 1	Offsite, in Rolling Hills subdivision near Caballeros Ave./Rancho Ln.	2,500	55.2	55.0
2017 – 2	Offsite, near intersection of SR 227/Crestmont Dr.	60	67.3	71.2
2017 – 3	Offsite, near intersection of Los Ranchos Road/Ketzel Lane	380	54.5	63.2

d. Sensitive Noise Receptors

Noise exposure goals for various types of land uses reflect the varying noise sensitivities associated with those uses. Residences, hospitals, schools, guest lodging, libraries, and churches are most sensitive to noise intrusion and therefore have more stringent noise exposure targets than manufacturing or agricultural uses that are not subject to impacts such as sleep disturbance. Offsite, San Luis Country Club Estates to the east and Rolling Hills residential development to the north in the project area would be considered sensitive receptors.

Figure 19 Ambient Noise Measurement Locations

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e. Regulatory Setting

Federal

FEDERAL HIGHWAY ADMINISTRATION

The FHWA has established standards that apply to roadway traffic noise for highways that are built using federal funding. These standards are used by Caltrans to evaluate roadway traffic noise levels and to define noise impacts under the federal criteria. While they do not apply to locally constructed roadways or land development projects, they provide guidance in identifying noise impacts. The FHWA criteria are found in 23 CFR Part 72 Table 1. For residential areas, the noise abatement criteria are a 1-hour Leq value of 67 dBA, or alternatively a statistical noise level that is exceeded 10% of the time (L10) of 70 dBA. These criteria are typically measured or computed for peak hour traffic volumes. When averaged with other daytime and nighttime noise levels associated with normal traffic distribution patterns, the peak hour value of 67 dBA is commonly associated with Ldn or CNEL values of about 65 dBA.

FEDERAL NOISE CONTROL ACT (1972)

Public Law 92-574 regulates noise emissions from operation of all construction equipment and facilities; establishes noise emission standards for construction equipment and other categories of equipment; and provides standards for the testing, inspection, and monitoring of such equipment. This Act gives states and municipalities primary responsibility for noise control.

FEDERAL TRANSIT ADMINISTRATION CRITERIA

The FTA developed methodology and significance criteria to evaluate vibration impacts from surface transportation modes (i.e., passenger cars, trucks, buses, and rail) in the *Transit Noise Impact and Vibration Assessment* (FTA 2006). For residential areas, the impact criteria for groundborne vibration ranges from 72-80 VdB depending on the frequency of occurrence of the events causing the vibration (FTA 2006:Table 8-1).

State

STATE OF CALIFORNIA'S GUIDELINES FOR THE PREPARATION AND CONTENT OF NOISE ELEMENT OF THE GENERAL PLAN (1987)

These guidelines reference land use compatibility standards for community noise environments as developed by the California Department of Health Services, Office of Noise Control. Sound levels up to 65 Ldn or CNEL are determined in these guidelines to be normally acceptable for multi-family residential land uses. Sound levels up to 70 CNEL are normally acceptable for buildings containing professional offices or defined as business commercial. The guidelines recommend that a detailed analysis of noise reduction requirements be prepared when new residential development is proposed in areas where existing sound levels approach 70 CNEL.

THE CALIFORNIA ADMINISTRATIVE CODE (CAC), TITLE 24, NOISE INSULATION STANDARDS

These standards regulate interior noise levels for all new multi-family residences to 45 Ldn or below. If exterior sound levels exceed 60 Ldn, CAC Title 24 requires the preparation of an acoustical analysis showing that the proposed design would limit the sound level to, or below the 45 Ldn requirement.

Local

COUNTY OF SAN LUIS OBISPO GENERAL PLAN NOISE ELEMENT

According to State law, a noise element is a required component of all city and county general plans. The County of San Luis Obispo 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. The County *Noise Element* sets maximum allowable noise exposure from both transportation and stationary sources. These maximum levels are listed in Table 23 and Table 24, below.

Table 23 Summary of Compatibility of Land Uses with CNEL Contours

Land Use	Outdoor Activity Areas[1] Ldn/CNEL, dBA	Interior Spaces Ldn/CNEL, dBA	Interior Spaces Leq, dBA[2]
Residences, Hotels and Motels, Hospitals, and Nursing and Personal Care	60[3]	45	–
Public Assembly and Entertainment	–	–	35
Offices	60[3]	–	45
Churches, Meeting Halls, Schools, Libraries and Museums	–	–	45
Outdoor Sports and Recreation	70	–	–

[1]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.

[2]As determined for a typical worst-case hour during periods of use.

[3]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 practical application of the best available noise reduction measures, an exterior noise level of up to 65 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: County *Noise Element* (San Luis Obispo County May 1992:Table 3-1)

Table 24 Maximum Allowable Noise Exposure: Stationary Noise Sources[1]

	Daytime (7 a.m. to 10 p.m.)	Nighttime (10 p.m. to 7 a.m.)
Hourly Leq, dBA[3]	50	45
Maximum Level, dBA[3]	70	65
Maximum Level, dBA – Impulsive Noise[4]	65	60

[1]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.

[2]Applies only where the receiving land use operates or is occupied during nighttime hours.

[3]Sound level measurements shall be made with slow meter response.

[4]Sound level measurements shall be made with fast meter response.

Source: County Noise Element (San Luis Obispo County May 1992:Table 3-2)

Goals of the Noise Element

1. To protect the residences of San Luis Obispo County from the harmful and annoying effects of exposure to excessive noise
2. To protect the economic base of San Luis Obispo County by preventing incompatible land uses from encroaching upon existing or planned noise-producing uses
3. To preserve the tranquility of residential areas by preventing the encroachment of noise-producing uses
4. To educate the residents of San Luis Obispo County concerning the effects of exposure to excessive noise and the methods available for minimizing such exposure
5. To avoid or reduce noise impacts through site planning and project design, giving second preference to the use of noise barriers and/or structural modifications to buildings containing noise-sensitive land uses

COUNTY OF SAN LUIS OBISPO NOISE ORDINANCE

Section 22.10.120 of the County code establishes allowable limits for noise generation that would affect sensitive land uses – including residential areas. These standards typically apply to stationary mechanical equipment, special events, or other noise producing activities, and are based on the Noise Element standards summarized in Table 23 above. For daytime hours (7 a.m. to 10 p.m.) the 1-hour Leq at the affected property line should not exceed 50 dBA, and the maximum noise level should not exceed 70 dBA. There are several exceptions for which these limits do not apply. One of the exceptions is construction activity, as long as construction does not take place before 7 a.m. or after 9 p.m. on weekdays, or before 8 a.m. or after 5 p.m. on Saturday or Sunday (22.10.120.A.4).

AIRPORT LAND USE PLAN FOR THE SAN LUIS OBISPO COUNTY REGIONAL AIRPORT

The *Airport Land Use Plan for the San Luis Obispo County Regional Airport* (ALUP; Airport Land Use Commission of San Luis Obispo County 2005), prepared by the County and used in review of projects by the County Airport Land Use Commission, is intended to minimize incompatibilities between land uses and the safety and noise conditions that are associated with airport operations and air traffic. The most recently adopted amendment to the ALUP was prepared in 2005, and is used in this EIR. County procedures require that a determination of consistency with the ALUP be made by the Airport Land Use Commission for all development projects within the Airport Land Use Planning Area. The Airport Land Use Planning Area is an irregular oval which is aligned with its long axis in a northwest-southeast direction, parallel to the centerline of Runway 11-29 at the airport (Airport Land Use Commission of San Luis Obispo County 2005:Section 2.3).

Residential uses are categorized in the ALUP as one of several “Extremely Noise Sensitive Land Uses” (Airport Land Use Commission of San Luis Obispo County 2005:Section 4.3.2.1). Noise policies from the Airport Land Use Plan are stated in terms of defining projects that would be determined to be inconsistent with the compatibility criteria in the plan. Briefly, these policies are summarized as follows:

Policy N-1. Would permit or fail to sufficiently prohibit establishment within the projected 60-dB CNEL contour of any extremely noise-sensitive land use.

Policy N-2. Would permit or fail to sufficiently prohibit any extremely noise-sensitive land use within the projected 55-dB CNEL contour, with the exception of developments which meet the criteria delineated in Section 4.3.2.3 for designation as infill.

Policy N-3. Would permit or fail to sufficiently prohibit any moderately noise-sensitive land use within the projected 55-dB CNEL contour, with the exception of developments which meet the requirements for mitigation of interior noise levels specified in Table 4 and in Section 4.3.3.

Policy N-4. Would permit or fail to sufficiently prohibit, in any location which is within or adjacent to an area of demonstrated noise incompatibility or in an acoustic environment substantially similar to an area of demonstrated noise incompatibility:

a. Any new residential or other extremely noise-sensitive development
b. Any new moderately noise-sensitive development, unless adequate, specific, and detailed provisions are set forth to mitigate noise incompatibility between allowable or proposed noise-sensitive uses (including foreseeable outdoor activities) and airport operations.

Noise levels associated with aircraft operations around the San Luis Obispo County Regional Airport are summarized and presented as a series of noise contours showing areas subject to 60 dBA, 55 dBA, and 50 dBA CNEL values (Airport Land Use Commission of San Luis Obispo County 2005:Figure B-1). The criteria used to determine compatibility for residential areas are presented in Table 25 below.

Table 25 Summary of Compatibility of Land Uses with CNEL Contours

Noise Environment	Extremely Noise-Sensitive Land Uses
Inside 60 dB CNEL contour	Prohibited
Between 55 and 60 dB CNEL contours	Infill Only*
Outside 55 CNEL dB contour	Allowable

* Specific criteria identified by the ALUP for designation as infill development must be met.
Source: Airport Land Use Commission of San Luis Obispo County 2005:Table5

4.9.2 Impact Analysis

a. Methodology and Significance Thresholds

Significance Thresholds

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
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

For most instances evaluating the effects of traffic or other long-term noise, the County guideline of 60 dBA Ldn or CNEL for residential uses presented in Table 23 above is used. For areas closer to roadways where the 60 dBA Ldn limit may already be exceeded, then the evaluation is based on

whether the project related increase would be 3 dBA or more, which would be noticeable. Requirements in the County Noise Ordinance are used to evaluate temporary construction activities, and other potential sources of noise on the project. The noise compatibility standards in the Airport Land Use Plan (see Table 25 above) are also consistent with the County *Noise Element* standards, and are used to evaluate the effects of aircraft noise.

Methodology

Roadway traffic noise levels were estimated using the Federal Highway Administration *Highway Traffic Noise Prediction Model* (FHWA December 1978). This is an older traffic noise model that is still in wide use because it is relatively simple to use, and because it tends to be more conservative than the newer FHWA *Traffic Noise Model* (i.e. the older model tends to over-predict noise levels by a few decibels when compared to the newer model, particularly for locations relatively near roadways). Traffic data, including average daily traffic (ADT) volumes and the percentage of truck traffic, was obtained from the most recent Caltrans traffic counts (Caltrans 2015). The initial model results give Leq values at a distance of 50 feet from the centerline of the roadway. An attenuation rate of 3 dBA for each doubling of distance was used to estimate results at other distances. The model inputs, assumptions, and results are included in Appendix G. The brief comparison of model daytime results with the measured Leq values in Table 22 indicates that the FHWA model was relatively accurate in predicting the measured noise levels. For all locations at relatively large distances from SR 227, the resulting Leq values and the computed Ldn values would be below 60 dBA, so no refinements, barrier specifications, or other calculations were performed.

Construction noise was evaluated based on an assumption of eight graders, trucks, and other conventional pieces of construction equipment operating simultaneously on the site. Noise levels from typical construction equipment were estimated using data published in the Federal Highway Administration (FHWA) *Roadway Construction Noise Model User's Guide* (FHWA January 2006:Table 1). Distances between construction activity locations and nearby residences on Greystone Place would vary from about 300 to well over 1,000 feet, so a common default distance of 500 feet and a point source attenuation rate of 6 dBA per doubling of distance were used to estimate construction noise. Source noise levels, normal assumptions regarding duty cycles and other information are in Appendix G.

A review of potential construction vibration effects indicates that most potential impacts are associated with blasting, pile driving, pavement cracking, and similar activities involving high energy impulsive operations. Since the Jack Ranch SLO Agricultural Cluster Project would not involve any activities of this type, a detailed vibration evaluation was not performed.

Airport and air traffic noise is evaluated based on the most recent Ldn noise contours and compatibility standards of the Airport Land Use Plan.

b. Project Impacts

Threshold:	Would the project expose people to noise levels that exceed the County Noise Element Thresholds?

Impact N-1 **THE PROJECT WOULD INVOLVE DEVELOPMENT OF NEW RESIDENCES IN AN AREA WELL OUTSIDE OF THE NOISE INFLUENCE OF SR 227 AND OTHER NOISE SOURCES. THIS WOULD BE A CLASS III, LESS THAN SIGNIFICANT, IMPACT.**

Based on noise measurements, a review of noise contours in the County General Plan Noise Element, and estimates using accepted noise models, the Ldn or CNEL values at the sites of proposed residences would range from 50 to 55 dBA. This is well under the County standard of 60 dBA, so noise levels would be well below the threshold used to define a significant impact.

Threshold:	Would the project generate permanent increases in the ambient noise levels in the project vicinity?

Impact N-2 **THE PROJECT DOES NOT INVOLVE ANY MAJOR STATIONARY NOISE SOURCES, AND WOULD NOT CONTRIBUTE A SUBSTANTIAL FRACTION TO TRAFFIC VOLUMES TO CAUSE A DISCERNABLE INCREASE IN NOISE LEVELS. THIS IMPACT WOULD BE CLASS III, LESS THAN SIGNIFICANT.**

The project would develop 13 residential lots in an agricultural cluster subdivision, adjacent to two existing residential neighborhoods. According to the *Updated Traffic and Circulation Study*, prepared by Associated Transportation Engineers in June 2016, the project would generate 124 ADT – a traffic volume too low to discernably affect existing roadway traffic noise in the area. No major stationary noise sources are proposed. Any pumps or sewer lift stations would be located offsite and underground in association with the existing wastewater collection and treatment system operated by the County CSA 18. Periodic use of the wet weather pond proposed along the northern side of the project would generate low noise associated with the discharge and pumping of water at this location, which is well isolated from existing residences. For these reasons, the project would have a less than significant effect on existing noise levels.

Threshold:	Would the project cause a temporary or periodic increase in ambient noise in the project vicinity?

Impact N-3 **THE PROJECT WOULD INVOLVE TEMPORARY NOISE-PRODUCING CONSTRUCTION ACTIVITIES IN THE VICINITY OF EXISTING RESIDENCES ALONG GREYSTONE PLACE IN THE LOS RANCHOS NEIGHBORHOOD. IMPACTS WOULD BE CLASS II, LESS THAN SIGNIFICANT WITH INCORPORATION OF MITIGATION.**

Construction activities for the project would be conventional in the sense that they would not involve blasting, pile driving, or similar impulsive or intrusive noise generating activities. Grading with the use of blade scrapers, graders, heavy trucks, backhoes or other trenching equipment, temporary generators, and similar equipment would result in variable and temporary noise events on the site. Construction of the access drive and utilities from Greystone Place would necessarily involve activities in the vicinity of the residences near this location. Within the site itself, the nearest residential lots would be located about 300 feet from existing residences along Greystone Place, and much of the new construction would be located over 1,000 feet from these existing lots. Typical short-term Leq values at 500 feet from construction activity would be in the 60 to 65 dBA range, and Ldn values in this situation are estimated to be just at or above 60 dBA. There is a potential that the

usual County standard for daytime hourly Leq levels (50 dBA) or Ldn values (60 dBA) would be exceeded resulting in a Class II, potentially significant impact that can be mitigated.

Mitigation Measure

N-3

Limitation on Construction Hours. All construction activities shall be limited to the days and hours specified in the County Noise Ordinance Section 22.10.120, with additional limitations listed as follows. No construction shall occur before 7 a.m. or after 6 p.m. on weekdays, or before 8 a.m. or after 5 p.m. on Saturdays and Sundays.

Significance After Mitigation

With implementation of Mitigation Measure N-3 construction noise would not be completely eliminated, but the nuisance of construction noise would be greatly reduced and the impact would be reduced to a level below significance.

Threshold:	Would the project expose people to severe noise or vibration?

Impact N-4 CONSTRUCTION ACTIVITIES ARE NOT EXPECTED TO CAUSE SUBSTANTIAL NOISE OR VIBRATION EFFECTS OUTSIDE OF THE PROJECT AREA. THIS WOULD BE A CLASS III, LESS THAN SIGNIFICANT IMPACT.

Construction noise would occur with the project, but would be reduced as discussed in Impact N-3. The distances separating the proposed lots from the existing residences along Greystone Place is sufficient to avoid substantial vibration effects from conventional construction equipment. No additional mitigation measures are necessary and the potential for construction noise and vibration would be a less than significant impact.

Threshold:	Would the project be located within the Airport Review designation or adjacent to a private airstrip, and expose people residing or working in the project area to severe noise levels?

Impact N-5 THE PROJECT IS WITHIN THE AIRPORT REVIEW AREA FOR THE SAN LUIS OBISPO COUNTY REGIONAL AIRPORT, BUT IS LOCATED WELL OUTSIDE OF THE 50 DECIBEL CNEL NOISE CONTOUR. FOR THIS REASON, NOISE EFFECTS FROM AIRCRAFT OPERATIONS WOULD BE CLASS III, LESS THAN SIGNIFICANT.

Aircraft overflights occur in the project vicinity, and aircraft noise is a regular, if infrequent, event at the site. The development site is, however, over 1,000 feet outside of the nearest contour defining the areas where aircraft noise would exceed 50 dBA CNEL. In this area, the Airport Land Use Plan standards allow residential development. Therefore, the effect of aircraft noise is considered to be a less than significant impact.

c. Cumulative Impacts

Noise levels from both roadway traffic and aircraft operations in the project site generally range from 50 to 55 dBA Ldn. Even if both sources were considered to be at 55 dBA and were added using the appropriate methods for logarithmic addition, the resulting Ldn would be 58 dBA. This total is below the County Noise Element standard of 60 dBA. The project's contribution to increasing traffic noise levels would also be negligible (much less than 1 dBA). For these reasons, cumulative noise impacts would be less than significant.

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4.10 Public Services

4.10.1 Setting

a. Law Enforcement

Police services in the project area are provided by the San Luis Obispo County Sheriff's Department and California Highway Patrol (CHP). The sheriff station that would be the first responder to the project site is the Coast Station, located at 2099 10th Street, in the community of Los Osos, approximately 16 miles southeast of the site. The Coast Patrol Division provides law enforcement service from Avila Beach to the Monterey County line west of the Santa Lucia Mountain Range, including the unincorporated area of San Luis Obispo. The Coast Station is currently staffed with one commander, three sergeants, four senior deputies, 22 deputy sheriffs, and two legal clerks (Annual Report, San Luis Obispo County Sheriff's Office 2015). Calls for service, crime trends, and population figures are used to measure the adequacy of the Department's response in the area. Emergency response times from the station depend on where patrol vehicles are in relation to an emergency.

The project site is also located near the City of San Luis Obispo, where a CHP or City Police patrol vehicle can be dispatched in a short period. The San Luis Obispo Police Department is located at 1042 Walnut Street, approximately 7 miles north of the site. The nearest CHP office is located at 675 California Boulevard, approximately 4.75 miles northwest of the site.

b. Fire Protection

Fire services in the project area are provided by the California Department of Forestry and Fire Protection (CAL FIRE)/San Luis Obispo County Fire Department. The fire station that would be the first responder to the project site is Station 21, located at the San Luis Obispo County Regional Airport, approximately one mile north of the site. Station 21 provides fire protection services for the Edna Valley and rural areas surrounding the City of San Luis Obispo. Station 21 houses many specialized pieces of equipment including an engine, rescue, crash truck, water tender, and Aircraft Rescue Firefighting (ARFF) vehicle. The ARFF vehicle and engine are staffed by permanent personnel with the rescue and water tender served by a 25 person Paid Call Fire Company.

c. Schools

The San Luis Coastal Unified School District (SLCUSD) provides educational services for the City of San Luis Obispo and surrounding unincorporated area, City of Morro Bay, and the communities of Los Osos, Baywood, and Avila Beach. The SLUCSD San Luis Obispo area schools nearest to and likely to serve the project area include the following: Los Ranchos Elementary School (Transitional Kindergarten through 6th grade), located at 5785 Los Ranchos Road approximately 0.5 mile northeast of the site; Laguna Middle School (7th and 8th grade), located at 11050 Los Osos Valley Road, approximately seven miles northwest of the site; and San Luis Obispo High School (9th through 12th grade), located at 1499 San Luis Drive, approximately 6.5 miles north of the site.

Table 26 shows current SLCUSD San Luis Obispo area school enrollments and capacities. As shown therein, 2015-2016 K-12 enrollment is 7,640 students (San Luis Coastal Unified School District, Developer Fee Justification Study 2016).

Table 26 SLCUSD San Luis Obispo Area School Enrollments/Capacities

Grade Level	2015/16 Enrollment	2015/16 Capacity	2015/16 School Utilization Percentage
Kindergarten – 6	2,785	3,153	88.3%
7^{th} – 8^{th}	703	1,079	65.2%
9^{th} – 12^{th}	1,447	2,097	69.0%
Total (K-12)	4,935	6,329	78.0%

Source: Developer Fee Justification Study, San Luis Coastal Unified School District 2016

As shown in Table 26, SLCUSD San Luis Obispo area schools are currently operating within capacity.

d. Solid Waste

Through a franchise agreement with the County, the San Luis Garbage Company, Inc. is responsible for solid waste collection and diversion in the project area (Garbage Districts Map, San Luis Obispo County 2011). Solid waste generated by new development on the project site would be delivered to Cold Canyon Landfill. This landfill has been recently expanded and currently has capacity to accept waste for at least 20 years at the current rate of disposal. The landfill has a maximum permitted throughput of 1,650 tons per day and total permitted capacity of 23,900,000 cubic yard (CY) with a remaining capacity of 14,500,000 CY or 61 percent (California Department of Resources Recycling and Recovery 2016).

4.10.2 Impact Analysis

a. Methodology and Significance Thresholds

Project implementation would create significant impact relative to public resources if it would have an effect upon, or result in the need for new or altered public resources in any of the following conditions:

1. Fire protection
2. Police protection (e.g., Sheriff, CHP)
3. Schools
4. Roads
5. Solid Wastes
6. Other public facilities

b. Project Impacts

Threshold:	Would the project have an effect upon, or result in the need for new or altered public resources for fire protection?
Threshold:	Would the project have an effect upon, or result in the need for new or altered public resources for police protection?

Impact PS-1 PAYMENT OF PUBLIC FACILITY FEES AS A CONDITION OF PROJECT APPROVAL WOULD ENSURE THAT THE PROJECT WOULD NOT SUBSTANTIALLY AFFECT THE LOCAL FIRE OR LAW ENFORCEMENT PROTECTION SERVICES AND FACILITIES. THEREFORE, THIS IMPACT WOULD BE CLASS III, LESS THAN SIGNIFICANT.

Based upon a population generation factor of 2.52 persons per unit, the project's 13 proposed residential lots would increase the local population by 33 persons (DOF 2017). The increase in County residents would result in an incremental increase in the demand on County fire and law enforcement services and facilities. Particularly, this would result in increased demand on the CAL FIRE/San Luis Obispo County Fire Department and San Luis Obispo County Sheriff's Department personnel and facilities.

Pursuant to the County's Public Facilities Fees Ordinance (Title 18 of the San Luis Obispo County Code), the project applicant would be required to pay public facilities fees in order to obtain permits for, or the approval of the project. The County's *Public Facilities Financing Plan for Unincorporated Area Facilities* outlines the costs of facilities for unincorporated area services necessary to accommodate development in unincorporated areas of the County to the year 2025 as well as the fees required to cover those costs. Fees collected from the project applicant would mitigate potential impacts to sheriff and fire facilities resulting from the project by funding the construction, expansion, or improvements of public facilities as necessary. Upon payment of required public facilities fees, potential impacts to fire and law enforcement protection services and facilities as a result of project development would be less than significant.

Threshold:	Would the project have an effect upon, or result in the need for new or altered public resources for schools?

Impact PS-2 THE PROJECT WOULD NOT CONTRIBUTE TO EXCEEDANCE OF PUBLIC SCHOOL CAPACITIES AND WOULD BE REQUIRED TO PAY STATE MANDATED SCHOOL IMPACT FEES. THEREFORE, THIS IMPACT WOULD BE CLASS III, LESS THAN SIGNIFICANT.

Table 27 provides a summary of the number of students generated by the project based on the SLCUSD San Luis Obispo area student yield rates from the Developer Fee Justification Study (SLCUSD 2016).

Table 27 Project Student Generation

Grade Level	Student Yield Rates SFD/SFA	Proposed SFD/SFA Units	Student Generation[1]
Kindergarten – 6	0.302	13	4
7th – 8th	0.064		1
9th – 12th	0.119		2
Total (K-12)	0.485		7

1. Totals may vary slightly due to rounding.
Source: San Luis Coastal Unified School District 2016

Based on Table 27, the project would add an estimated 7 students to public schools in the County of San Luis Obispo.

The SLCUSD's existing school enrollments and capacities are shown in Table 28 alongside projected enrollments and capacities upon buildout of the project.

Table 28 District Enrollment and Capacity

Grade Level	2015/16 Enrollment	2015/16 Capacity	2015/16 School Utilization Percentage	Enrollments with Students Generated by the Project	Utilization with Student Generated by the Project
Kindergarten – 6th	2,785	3,153	88.3%	2,789	88.5%
7th – 8th	703	1,079	65.2%	704	65.2%
9th – 12th	1,447	2,097	69.0%	1,449	69.1%

Source: San Luis Coastal Unified School District 2016

As shown in Table 28, buildout of the project would not result in exceedance of SLCUSD school capacities.

Senate Bill 50 (SB 50; Government Code Section 65970) implemented school impact fee reforms in 1998 by amending the laws governing developer fees and school mitigation. Pursuant to SB 50, development projects are required to pay school impact fees established to offset potential impacts on school facilities. The project would not result in additional students that would contribute to over-capacity at public schools, and the collection of state-mandated fees under SB 50 is considered full and complete mitigation for impacts to public schools. The project applicant would be required by State law to pay the fair share of impact mitigation fees, and impacts to public schools would be less than significant.

Threshold:	Would the project have an effect upon, or result in the need for new or altered public resources for solid waste disposal?

Impact PS-3 THE PROJECT WOULD NOT RESULT IN EXCEEDANCE OF AVAILABLE SOLID WASTE DISPOSAL FACILITIES. THEREFORE, THIS IMPACT WOULD BE CLASS III, LESS THAN SIGNIFICANT.

Solid waste generation from residential projects is a function of the number of homes, household size, and per capita waste generation. Based on the California Department of Resources Recycling

and Recovery (CalRecycle) *2014 Disposal-Facility-Based Characterization of Solid Waste in California*, the per capita disposal rate for franchised residential waste (single-family and multi-family) is approximately 0.38 tons per person per year (CalRecycle 2015). Based upon a population generation factor of 2.52 persons per unit, the 13 proposed residential lots would result in 33 new residents reliant on solid waste services (DOF 2017). The 33 new residents would generate a total of approximately 12.5 tons of waste per year or 0.03 tons of waste per day. This amount of solid waste generated by the project represents an extremely small percentage (less than 0.01 percent) of the maximum permitted throughput of 1,650 tons per day. The landfill has been recently expanded and currently has capacity to accept waste for at least 20 years at the current rate of disposal. The project would not result in exceedance of the landfill capacity or maximum daily throughput such that new services or facilities would be required prior to the expected 20 year life of the current facilities. Therefore, impacts of the project to solid waste disposal resources would be less than significant.

c. Cumulative Impacts

Table 6 in Section 3.0, *Environmental Setting*, lists potential future development within the vicinity of the project site. By increasing the population and the number of structures in the County of San Luis Obispo, cumulative development in the area would increase the demand for County-provided public services, and increase users of area roadways and other transportation infrastructure such that new or expanded facilities may be necessary. The project applicant as well as applicants for other projects approved in the County would be required to pay Public Facility Fees to the County that would provide for improved services and facilities as necessary. The project is consistent with the County General Plan and service facilities have been planned to meet the additional service demand. Therefore, the project's contribution to cumulative impacts to public services would be less than significant.

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4.11 Transportation and Circulation

This section evaluates the project's impact to the local transportation and circulation network. The analysis is based upon the *Updated Traffic and Circulation Study* prepared for the project by Associated Transportation Engineers (ATE), dated June 21, 2016, and the *SR 227 Operations Study,* published by the San Luis Obispo Council of Governments (SLOCOG) on December 7, 2016. The *SR 227 Operations Study* was determined by the County as appropriate for use in this section as the traffic data is more recent than that in the *Updated Traffic and Circulation Study* and provides a more comprehensive evaluation of existing and forecasted conditions throughout the SR 227 corridor, which is the primary route through this area of the County and in the vicinity of the project site.

4.11.1 Setting

The project site is located on the northwest side of Greystone Place approximately one-half mile south of Los Ranchos Road, south of the City of San Luis Obispo. The project includes subdivision of the project site to facilitate development of 13 single-family residences. Access to the project site would be provided via a new roadway connection to Greystone Place. The on-site road for the new neighborhood would be built to County standards, but would be gated and privately maintained. Emergency access would be provided via two private roads that connect to the Rolling Hills neighborhood located northeast of the project site.

a. Roadway Network

The project site is served by a network of rural roadways as illustrated on Figure 20. The following text provides a brief discussion of major components of the study area roadway network.

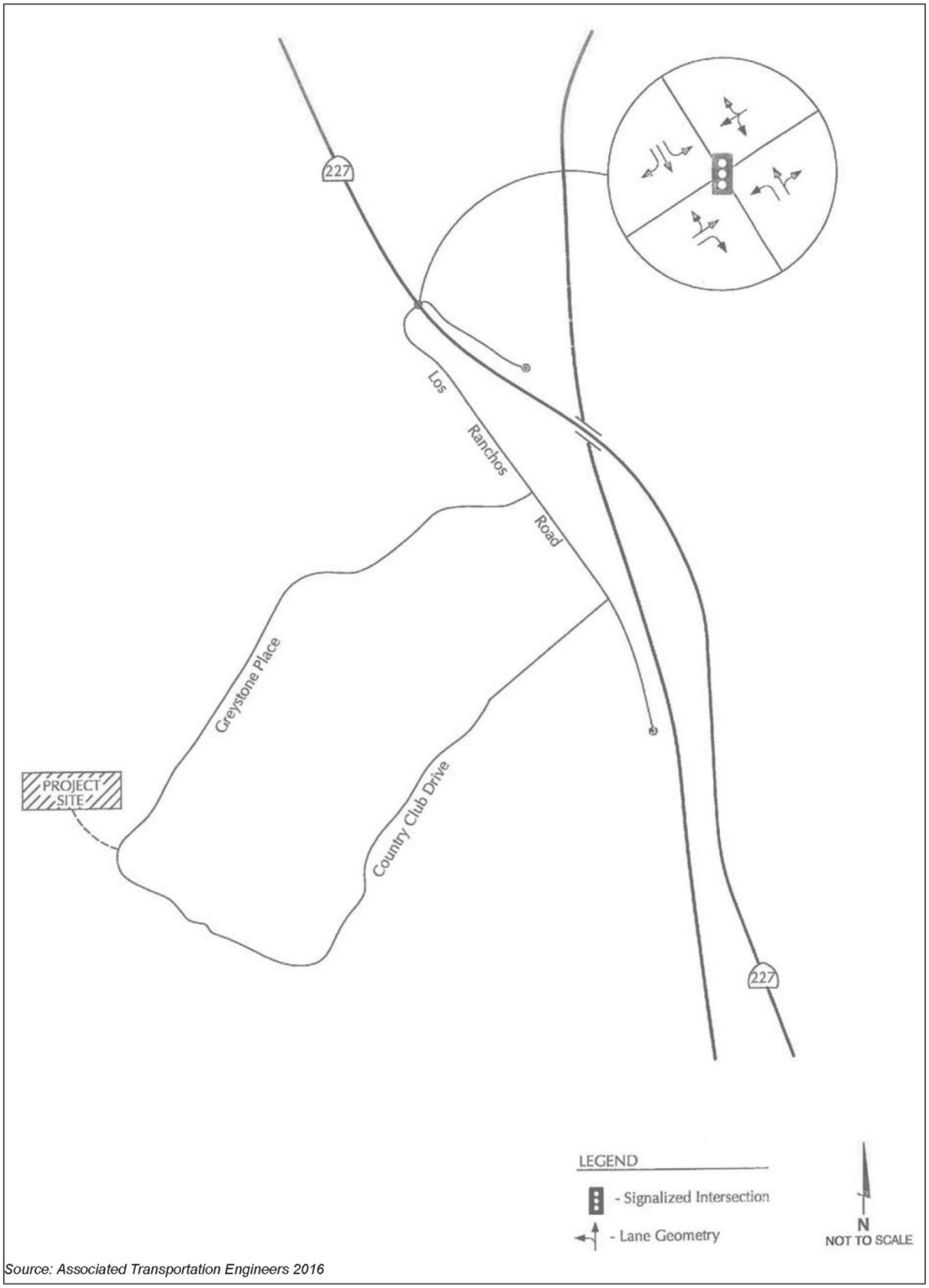
State Route (SR) 227

SR 227 is a 14-mile long rural arterial roadway that extends north from U.S. Highway 101 (U.S. 101) in the City of Arroyo Grande to the U.S. 101 interchange at Madonna Road in the City of San Luis Obispo. This roadway primarily serves local and commute traffic between the Five Cities area and San Luis Obispo. Within the study area, SR 227 (also known as Edna Road) contains two 12-foot travel lanes and eight-foot shoulders. The SR 227 intersection at Los Ranchos Road is controlled by traffic signals.

Los Ranchos Road

Los Ranchos Road is a minor north-south road that runs between SR 227 and south of Country Club Drive. The San Luis Obispo County General Plan identifies Los Ranchos Road as a local street. From SR 227 south of Hacienda Avenue, Los Ranchos Road is a two-way street with one 12-foot travel lane and eight-foot wide Class II bicycle lanes in each direction. The road narrows and continues for about 1,200 feet south of Country Club Drive, where is serves residential and agricultural uses. There is no parking allowed on Los Ranchos Road from Hacienda Avenue to Country Club Drive. The posted speed limit along Los Ranchos Road is 40 mph.

Figure 20 Existing Roadway Network



Source: Associated Transportation Engineers 2016

Crestmont Drive

Crestmont Drive is a minor east-west road that runs between SR 227 and Caballeros Avenue. The San Luis Obispo County General Plan identifies Crestmont Drive as a local street. From SR 227 to Caballeros Avenue, Crestmont Drive is a two-way street with one 12-foot wide travel lane in each direction with 10-foot shoulders on both sides of the street. There are portions of Crestmont Drive with 8-foot angled parking on both sides of the street. Crestmont Drive is also the only access route for a residential neighborhood. No speed limit is posted.

Greystone Place

Greystone Place is a private two-lane local road that extends west from Los Ranchos Road and through the San Luis Obispo Country Club Estates. Primary access to the project site would be provided via a roadway connection to Greystone Place.

b. Roadway Operations

In December 2016, SLOCOG, in coordination with Caltrans and the City and County of San Luis Obispo, published the State Route 227 Operations Study (SR 227 Operations Study). The study examines the existing and future operational and safety performance of SR 227 from Tank Farm Road, approximately 1.7 miles north of the project site, to Price Canyon Road, approximately 2.2 miles south of the project site.

Existing average daily traffic (ADT) volumes for the study area roadways are shown on Figure 3 of the SLOCOG SR 227 Operations Study (2016). Traffic counts were performed on SR 227, side streets, and at intersections during the week of January 25, 2016 by Quality Counts Transportation Data Collection Service. For roadway segments, seven-day 24-hour continuous segment counts were performed on Los Ranchos Road, Crestmont Drive, and along four segments of SR 227. The ADT volumes on SR 227 were based on these traffic counts. The traffic data is shown in Appendix C of the SR 227 Operations Study. Table 29 summarizes the existing operations for the SR 227 corridor segments in the vicinity of the project site.

Table 29 Existing Roadway Operations

Roadway Segment	Direction	LOS (AM Peak Hour)	LOS (PM Peak Hour)
SR 227 north of Buckley Road	Northbound	E	D
	Southbound	C	E
SR 227 north of Crestmont Drive	Northbound	E	D
	Southbound	D	E
SR 227 South of Crestmont Drive	Northbound	E	C
	Southbound	D	E
SR 227 South of Los Ranchos Road	Northbound	E	C
	Southbound	C	E

Source: Table 9, SLOCOG 2016

As shown in Table 29, most segments of SR 277 operate below LOS C during one or both peak hours. The segments that operate at LOS C or better include north of Buckley Road (southbound AM), Los Ranchos Road to Crestmont Drive (AM/PM), and south of Los Ranchos Road (northbound PM).

Northbound travel experiences poorer operating conditions in the AM peak hour, and the pattern reverses in the PM peak hour. Therefore, under existing conditions, SR 227 operations generally do not meet the County's Level of Service (LOS) C standard for rural area roadways. The LOS values for the roadway segments included in Table 29 are based on an evaluation of the percent of time vehicles spent following others and the percent of vehicles traveled at free-flow conditions (SLOCOG December 2016:page 22 and Table 9). Both of these measures are influenced by congestion at intersections.

c. Intersection Operations

Since traffic flow on roadway networks is most restricted at intersections, detailed traffic impact analyses focus on operating conditions of critical intersections during peak travel periods. In rating intersection operations, designations of LOS 'A' through LOS 'F' are used, with LOS A indicating free flow operations and LOS F indicating congested operations. As stated above, the County of San Luis Obispo has adopted LOS C as the minimum standard for rural roadway and intersection operations. Table 30 presents the LOS criteria for intersections.

Table 30 Level of Service Criteria for Intersections

LOS	Signalized intersections (V/C Ratio)	Unsignalized intersections (Sec. of delay)	Definition
A	< 0.60	< 10	Conditions of free unobstructed flow, no delays and all signal phases sufficient in duration to clear all approaching vehicles.
B	0.61 – 0.70	> 10 and < 15	Conditions of stable flow, very little delay, a few phases are unable to handle all approaching vehicles.
C	0.71- 0.80	> 15 and < 25	Conditions of stable flow, delays are low to moderate, full use of peak direction signal phases is experienced.
D	0.81 – 0.90	> 25 and < 35	Conditions approaching unstable flow, delays are moderate to heavy, significant signal time deficiencies are experienced for short durations during the peak traffic period.
E	0.91 – 1.00	> 35 and < 50	Conditions of unstable flow, delays are significant, signal phase timing is generally insufficient, congestion exists for extended duration throughout the peak period.
F	> 1.00	> 50	Conditions of forced flow, travel speeds are low and volumes are well above capacity. This condition is often caused when vehicles released by an upstream signal are unable to proceed because of back-ups from a downstream signal.

Source: Highway Capacity Manual, Fifth Edition, Transportation Research Board 2010

Traffic operations at intersections were analyzed using the procedures and methodologies contained in the Transportation Research Boards Highway Capacity Manual (HCM 2010). For signalized intersections, the HCM operational method calculates the average control delay per vehicle (sec/veh), and assigns an LOS designation based upon the amount of delay. Figure 3 of the SLOCOG SR 227 Operations Study (2016) shows the Existing A.M. and P.M. peak hour traffic volumes

at the intersections nearest to the project site, including the SR 227/Los Ranchos Road and SR227/Crestmont Drive intersections. Existing levels of service are shown in Table 31.

Table 31 Existing Intersection Operations

	Delay/LOS	
Intersection	**A.M. Peak Hour**	**P.M. Peak Hour**
SR 227/Los Ranchos Road	130.3/LOS F	25/LOS C
SR 227/Crestmont Drive	>300.0/LOS F	279.7/LOS F

Source: Table 7, SLOCOG 2016

As shown in Table 31, the SR 227/Los Ranchos Road intersection currently operates at LOS F in the A.M. peak hour period and LOS C during the P.M. peak hour period. The SR 227/Crestmont Drive intersection operated at LOS F during the A.M. and P.M. peak hours. Therefore, these intersections are generally operating at unacceptable levels based on the County's LOS C standard for rural intersections.

d. Existing Pedestrian, Bicycle, and Transit Facilities

Per the Streets and Highways Code Section 890.4, bikeways are defined as "facilities that provide primarily for, and promote, bicycle travel." The Streets and Highway Code defines four bikeway classifications (Classes I through IV). According to the County's Bikeways Plan (2016), the nearest existing bikeway to the project site is a Class I bikeway (also referred to as a bike path or shared use path) which is classified as a path that provides a completely separated right-of-way designated for the exclusive use of bicycles and pedestrians with minimized motorist crossflows. This bikeway extends from the intersection of SR 227 and Los Ranchos Road south to the intersection of Los Ranchos Road and Country Club Drive in the San Luis Obispo Country Club Estates. An additional Class I bikeway is proposed for the portion of SR 227 that extends from Farmhouse Lane near the San Luis Obispo County Regional Airport to Price Canyon Road. No other bicycle or pedestrian facilities exist or are planned for the roadways nearest to the project site.

San Luis Obispo Regional Transit Authority (SLO RTA) Route 10X provides service between San Luis Obispo and Orcutt with one transit stop along SR 227 at Aerovista Lane, in the afternoon on weekdays.

e. Regulatory Setting

California Department of Transportation

Caltrans manages the operation of State Highways, including the U.S. 101, which passes through the San Luis Obispo area, and SR 227, from which the project site is visible and can be accessed.

Senate Bill (SB) 743

To further the State's commitment to the goals of SB 375, Assembly Bill (AB) 32, and AB 1358, SB 743 adds Chapter 2.7, Modernization of Transportation Analysis for Transit-Oriented Infill Projects, to Division 13 (Section 21099) of the Public Resources Code. Key provisions of SB 743 include reforming CEQA analysis of aesthetics and parking for urban infill projects and replacing the measurement of automobile delay with vehicle miles traveled (VMT) as a metric that can be used

for measuring environmental impacts. Under SB 743, the focus of the environmental impacts of transportation shift from driver delay to reduction of GHG emissions, creation of multimodal networks, and promotion of a mix of land uses, and LOS standards become local policy thresholds as adopted among individual agencies.

Currently official measures and significance thresholds are still being developed and have not yet been adopted under CEQA. Therefore automobile LOS is still used as a significance threshold for CEQA review. Due to the location of the project beyond the urban extent of surrounding Cities, the project would be expected to result in an increase in regional VMT, but not at a greater level or above the average for development in this area. The traffic study prepared for the Jack Ranch SLO Agricultural Cluster Project analyses multimodal LOS and, in the absence of official significance thresholds, no findings in regard to VMT are made at this time.

County of San Luis Obispo

In October 2017 and based on the results of the SLOCOG SR 227 Operations Study, the County of San Luis Obispo Department approved the SR 227 Road Improvement Fee Program (Program) to mitigate traffic impacts from new development occurring within the SR 227 corridor. The Program requires establishment of a Road Improvement Fee Agreement between project applicants and the County Department of Public Works for payment of fair share road improvement fees prior to issuance of development permits for projects within a "Fee Area". The amount of mitigation fee shall be determined by the applicants civil or traffic engineer and approved by Public Works in the Road Improvement Fee Agreement. Program funds will be used for planning, right of way, environmental, design, and construction of intersection improvements (roundabouts or signalization) for SR 227 at Farmhouse Lane, Buckley Road, Crestmont Drive, and Los Ranchos Road. The project would be located in the Program Fee Area.

4.11.2 Impact Analysis

a. Methodology and Significance Thresholds

County of San Luis Obispo impact thresholds were used to assess the significance of the traffic generated by the project. The County designates LOS C as the minimum acceptable level of service for County-maintained rural roadways and intersections. In accordance with the *State CEQA Guidelines*, a project would result in a significant impact if it would:

- Increase vehicle trips to local or areawide circulation system;
- Reduce existing "Level of Service" on public roadway(s);
- Create unsafe conditions on public roadways (e.g., limited access, design features, slight distance, slow vehicles);
- Provide for adequate emergency access;
- 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.);
- Conflict with an applicable congestion management program;
- Conflict with adopted policies, plans, or programs regarding public transit, bicycle, or pedestrian facilities, or otherwise decrease the performance or safety of such facilities; and/or
- Result in a change in air traffic patterns that may result in substantial safety risks.

As the designated Regional Transportation Planning Agency for providing transportation planning and funding for the region, SLOCOG adopted a Regional Transportation Plan – Preliminary Sustainable Communities Strategy (RTP/SCS), a comprehensive plan guiding transportation policy for the region, in 2010. SLOCOG most recently updated the RTP/SCS in 2014.

SLOCOG was previously designated as the Congestion Management Agency and, in 1994, prepared a Congestion Management Program (CMP) for the area. In 1997, SLOCOG and its member agencies discontinued the CMP and integrated most of its procedures into other planning and program activities. Thus, there is no specific congestion management plan or program or related CMP LOS criteria applicable to the project area, but related transportation goals and policies are incorporated into other programs that apply throughout the County. However, the previous CMP approach of evaluating effects of a project to the local roadway system based on LOS standards does apply and is addressed in the following discussions of transportation and circulation impacts associated with the project.

Project Trip Generation

The project would result in the development of 13 single-family homes. Trip generation estimates were calculated for the project using the Single-Family Detached Housing rates (Land Use Code #210) published in the Institute of Transportation Engineers (ITE) Trip Generation Report. As shown in Table 32, the project would generate 124 ADT, with 10 trips during the A.M. peak hour and 13 trips during the P.M. peak hour.

Table 32 Project Trip Generation

		ADT		A.M. Trips		P.M. Trips	
Land Use	**Size**	**Rate**	**Trips**	**Rate**	**Trips**	**Rate**	**Trips**
Single Family Residential	13 dwelling units	9.52	124	0.75	10	1.00	13

Source: Table 3, ATE, June 2017 (Appendix H of this EIR)

Cumulative Traffic Volumes and Roadway Operations

2025 TRAFFIC VOLUMES

Interim year (2025) traffic volumes were estimated using linear interpolation of the existing traffic counts and post-processed 2035 travel forecasts for roadway segments and intersections along SR 227 and in the vicinity of the project site. Interim (2025) corridor segment traffic operations are summarized in Table 33.

Table 33 Interim 2025 Corridor Segment Operations

Roadway Segment	Direction	LOS (AM Peak Hour)	LOS (PM Peak Hour)
SR 227 north of Buckley Road	Northbound	E	D
	Southbound	D	E
SR 227 north of Crestmont Drive	Northbound	E	D
	Southbound	D	E
SR 227 South of Crestmont Drive	Northbound	E	D
	Southbound	D	E
SR 227 South of Los Ranchos Road	Northbound	E	C
	Southbound	C	E

Source: Table 12, SLOCOG 2016

Interim (2025) intersection traffic operations at the intersections nearest to the project site, including the SR 227/Los Ranchos Road and SR227/Crestmont Drive intersections, are summarized in Table 34.

Table 34 Interim 2025 Intersection Traffic Operations

	Delay/LOS	
Intersection	A.M. Peak Hour	P.M. Peak Hour
SR 227/Los Ranchos Road	123.4/LOS F	45.0/LOS D
SR 227/Crestmont Drive	>300.0/LOS F	>300.0/LOS F

Source: Table 10, SLOCOG 2016

As shown in Table 33 and Table 34, under Interim (2025) conditions, all intersections and corridor segments included in the SR 227 Operations Study evaluation would fail to operate at LOS C or better in the AM/PM peak hours.

2035 TRAFFIC VOLUMES

2035 traffic volume forecasts were based on the most recent update of the SLOCOG travel demand model. Future year land use assumptions reflect the preferred land use of SLOCOG's adopted 2014 Regional Transportation Plan/ Sustainable Communities Strategy (RTP/SCS). Future roadway improvements were limited to only those that are currently programmed (i.e., have an identified funding source and are listed in the approved Federal Transportation Improvement Program for San Luis Obispo County). As such, the future year volume projections reflect SR 227 as a two-lane facility. The traffic projections also do not reflect the potential circulation changes that could result from the planned but not yet programmed Prado Road Extension within the City of San Luis Obispo. Future (2035) corridor segment traffic operations are summarized in Table 35.

Table 35 Future 2035 Corridor Segment Operations

Roadway Segment	Direction	LOS (AM Peak Hour)	LOS (PM Peak Hour)
SR 227 north of Buckley Road	Northbound	E	D
	Southbound	D	E
SR 227 north of Crestmont Drive	Northbound	E	F
	Southbound	D	F
SR 227 South of Crestmont Drive	Northbound	E	F
	Southbound	D	F
SR 227 South of Los Ranchos Road	Northbound	E	D
	Southbound	C	E

Source: Table 15, SLOCOG 2016

Future (2035) intersection traffic operations at the intersections nearest to the project site, including the SR 227/Los Ranchos Road and SR227/Crestmont Drive intersections, are summarized in Table 36.

Table 36 Interim 2025 Intersection Traffic Operations

	Delay/LOS	
Intersection	A.M. Peak Hour	P.M. Peak Hour
SR 227/Los Ranchos Road	203.5/LOS F	76.6/LOS E
SR 227/Crestmont Drive	>300.0/LOS F	>300.0/LOS F

Source: Table 13, SLOCOG 2016

As shown in Table 35 and Table 36, under 2035 conditions, all intersections and all corridor segments included in the SR 227 Operations Study evaluation, with the exception of southbound traffic south of Los Ranchos Road during the AM peak hour, would fail to operate at LOS C or better in the AM/PM peak hours.

b. Project Impacts

Threshold:	Would the project increase vehicle trips to local or areawide circulation system?
Threshold:	Would the project reduce existing "Level of Service" on public roadway(s)?
Threshold:	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.)?

Impact T-1 PROJECT-GENERATED TRAFFIC WOULD INCREASE TRAFFIC VOLUMES ON AREA ROADWAYS AND AT INTERSECTIONS NEAR THE PROJECT SITE. COMPLIANCE WITH THE REQUIREMENTS OF THE COUNTY'S SR 227 CORRIDOR ROAD IMPROVEMENT FEE PROGRAM AND PAYMENT OF APPLICABLE FEES, IMPACTS TO AREA ROADWAY SEGMENTS AND INTERSECTIONS WOULD BE CLASS III, LESS THAN SIGNIFICANT.

The SLOCOG SR 227 Operations Study determined that, under current conditions, all SR 227 segments evaluated in the study exceed the County's LOS standard in either one or both peak hour periods (A.M./P.M.). These segments include SR 227 north of Buckley Road, SR 227 north of Crestmont Drive, SR 227 south of Crestmont Drive, and SR 227 south of Los Ranchos Road. The SLOCOG SR 227 Operations Study also determined that the SR 227/Los Ranchos Road intersection currently operates at LOS F in the A.M. peak hour period and LOS C during the P.M. peak hour period. The SR 227/Crestmont Drive intersection operates at LOS F during the A.M. and P.M. peak hours. Although the project would add a small amount of peak hour traffic to these segments and intersections, any addition of traffic to these roadway segments and intersections as a result of the project would cause already unacceptable conditions to worsen.

According to the SR 227 Operations Study, the form of intersection control can dramatically influence and define a corridor's operational efficiency. An Intersection Control Evaluation (ICE), consistent with Caltrans Traffic Operations Program Directive No. 13-02, was performed for the SR 227 intersections at Farmhouse Lane, Buckley Road, Crestmont Drive, and Los Ranchos Road. The ICE revealed that a substantial degree of "residual" or "potential" capacity exists at these intersections. Increasing capacity at the intersection "nodes" would improve operational efficiency to a point where travel through the corridor would no longer be as constrained by the intersections themselves. Based on the overall results of the SR 227 Operations Study, the following two corridor concepts to improve corridor intersection and roadway operations were evaluated: 1) SR 227 Widening with Coordinated Signal Control; and 2) SR 227 Roundabout Corridor. Both corridor concepts include the recommendation that the County of San Luis Obispo establish a secondary access for the Rolling Hills community via a connection to Buckley Road to the north. Given that establishing access to the Rolling Hills community is included in both corridor concepts and would not alter the ultimate facility sizing recommendations of either corridor concept, this access improvement was not reflected or incorporated into the technical comparative analysis of the alternative corridor concepts. Similarly, both corridor concepts include the construction of the 3.3 mile Edna/Price Canyon multi-purpose trail. However, each concept would result in a different alignment of the trail.

The intersection LOS for each of the fully implemented corridor concepts are summarized in Table 37 and Table 38, respectively.

Table 37 2035 Intersection Traffic Operations: SR 227 Widening with Coordinated Signal Control

Intersection	Control	LOS (AM Peak Hour)	LOS (PM Peak Hour)
SR 227/Crestmont Drive	Signalized	A	A
SR 227/Los Ranchos Road	Signalized	C	B

Source: Table 28, SLOCOG 2016

Table 38 2035 Intersection Traffic Operations: SR 227 Roundabout Corridor

Intersection	Control	LOS (AM Peak Hour)	LOS (PM Peak Hour)
SR 227/Crestmont Drive	Roundabout	A	A
SR 227/Los Ranchos Road	Roundabout	B	B

Source: Table 29, SLOCOG 2016

As shown in Table 37 and Table 38, the intersections nearest to the project site, including the SR 227/Los Ranchos Road and SR227/Crestmont Drive intersections**,** would operate at acceptable conditions (LOS C or better) during weekday AM and PM peak hours under both corridor concept alternatives.

ICE performance metric comparisons identified the relative differences in benefits and costs associated with the SR 227 Widening with Coordinated Signal Control Concept and the Roundabout Corridor Concept. These comparisons demonstrated that the Roundabout Corridor Concept provides greater relative benefits than the Widening with Coordinated Signal Control Concept. Phasing of the specific improvements that implement the Roundabout Corridor Concept were prioritized into immediate-, short-, medium-, and long-term phases. Converting the deficient intersection at SR227/Los Ranchos Road to a multilane roundabout is determined to be the top priority followed by the SR227/Buckley Road roundabout, channelization improvements at SR 227/Crestmont Drive, and the provision of a secondary access to the Rolling Hills community.

The project site is located within the County's SR 227 Corridor Road Improvement Fee Program Fee Area. Therefore, the project applicant would be required to enter into a Road Improvement Fee Agreement with the County Department of Public Works prior to issuance of development permits for the project for payment of fair share road improvement fees that would fund the necessary corridor improvements to implement the preferred Roundabout Corridor Concept. The *Resolution Creating the State Route 227 Corridor Road Improvement Fee […] and Adopting the Required Mitigated Negative Declaration and Initial Study*, prepared by the County Board of Supervisors on December 7, 2016, states that the cost estimates set forth in the Mitigated Negative Declaration for the SR 227 Operations Study are reasonable for advancing the construction of the road facilities and improvements identified in the study, including immediate-, short-, medium-, and long-term improvements, as necessary to improve operations in the corridor to an acceptable level. Therefore, with compliance with the requirements of the SR 227 Corridor Road Improvement Fee Program and payment of applicable fees, potential impacts to the County roadways and circulation system as a result of the project would be reduced below thresholds and would be less than significant.

Threshold: Would the project create unsafe conditions on public roadways (e.g., limited access, design features, slight distance, slow vehicles)?

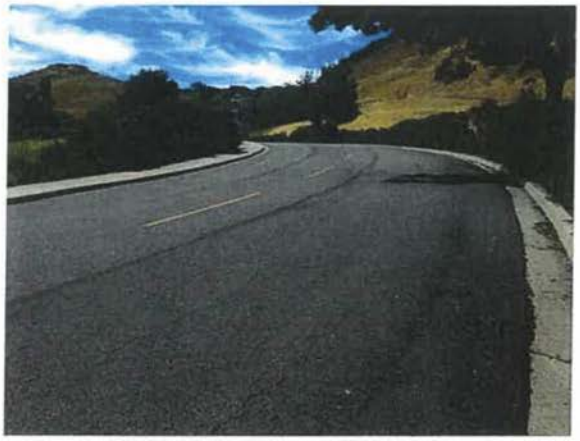
Impact T-2 THE PROJECT WOULD NOT RESULT IN LIMITED ACCESS, INADEQUATE SIGHT DISTANCE, SLOW VEHICLES, OR ANY OTHER DESIGN FEATURES THAT WOULD CREATE UNSAFE CONDITIONS ON PUBLIC ROADWAYS. THEREFORE, IMPACTS WOULD BE CLASS III, LESS THAN SIGNIFICANT.

Access to the project site would be provided via a new roadway connection to Greystone Place (refer to proposed project site plan on Figure 5). The on-site road for the new neighborhood would be built to County standards, but would be gated and privately maintained. As shown on Figure 21, the proposed new driveway to access the project site would provide a sight distance of 248 feet to

Figure 21 Greystone Drive Site Distances

DRIVEWAY SIGHT DISTANCE

SIGHT DISTANCE TO EAST



SIGHT DISTANCE TO WEST

Source: Associated Transportation Engineers 2016

the west and 455 feet to the east. This sight distance in both directions would be adequate to provide for safe entrance into and exit from the project site. The project does not proposed any sharp curves of other hazardous design features. Therefore, the project would not create unsafe conditions on public roadways and this potential impact would be less than significant.

Threshold:	Would the project provide for adequate emergency access?

Impact T-3 EMERGENCY ACCESS TO THE PROJECT SITE WOULD BE PROVIDED VIA TWO PRIVATE ROADS THAT CONNECT TO THE ROLLING HILLS NEIGHBORHOOD LOCATED NORTHEAST OF THE PROJECT SITE. THEREFORE, THE PROJECT WOULD PROVIDE ADEQUATE EMERGENCY ACCESS AND POTENTIAL IMPACTS WOULD BE CLASS III, LESS THAN SIGNIFICANT.

As shown on Figure 22, emergency access to the project site would be provided via two private roadways including Ketzel Lane and an unidentified route between two residential lots near the western terminus of Caballeros Avenue in the Rolling Hills neighborhood located northeast of the project site. Provision of these emergency access connections between the project site and the Rolling Hills neighborhood would enhance the emergency access routing for both neighborhoods. In the event of an emergency where the Crestmont Drive connection to SR 227 is blocked, the Rolling Hills residents would be able access the emergency routes through the project site and exit to SR 227 through the San Luis Country Club Estates. Conversely, in the event of an emergency where the Los Ranchos Road connection to SR 227 is blocked, the San Luis Country Club Estates residents would be able access the emergency routes through the project site and exit to SR 227 through the Rolling Hills subdivision. Furthermore, the project proposes dedication of a future emergency access route that would exit the project site to the west, upon future development of the western adjacent property. Therefore, the project would provide adequate emergency access for the project and improve the conditions of the emergency access routes for existing development in the vicinity of the site. Impacts would be less than significant.

Threshold:	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?

Impact T-4 THE PROJECT WOULD NOT GENERATE PUBLIC TRANSIT, PEDESTRIAN, OR BICYCLE TRIPS THAT WOULD DECREASE THE PERFORMANCE OR SAFETY OF SUPPORTING FACILITIES. IMPACTS WOULD BE CLASS III, LESS THAN SIGNIFICANT.

Pedestrian and Bicycle

Due to the generally rural/isolated nature of the project site's regional location, there would be a limited volume of project-generated external pedestrian and bicycle trips (that travel to/from locations outside the study area). The impact of project generated pedestrian/or bicycle traffic would be less than significant.

Transit

SLO RTA Route 10X makes one transit stop along SR 227 in the afternoon on weekdays, north of the project site at the San Luis Obispo County Regional Airport. The project would not substantially increase the demand for public transit services such that another stop would be necessary to serve the project site. Therefore, impacts would be less than significant.

Figure 22 Emergency Access Routes

Source: Associated Transportation Engineers 2016

c. Cumulative Impacts

Impact T-5 PROJECT-GENERATED TRAFFIC WOULD FURTHER DEGRADE UNACCEPTABLE INTERSECTION AND ROADWAY SEGMENT OPERATIONS UNDER INTERIM (2025) AND FUTURE YEAR (2035) CONDITIONS. COMPLIANCE WITH THE REQUIREMENTS OF THE COUNTY'S SR 227 CORRIDOR ROAD IMPROVEMENT FEE PROGRAM AND PAYMENT OF APPLICABLE FEES, THE PROJECT'S CONTRIBUTION TO CUMULATIVE IMPACTS TO AREA INTERSECTIONS AND ROADWAYS WOULD BE CLASS III, LESS THAN SIGNIFICANT.

The SLOCOG SR 227 Operations Study determined that the intersections nearest to the project site (SR 227/Crestmont Drive and SR 227/Los Ranchos Road) operate at unacceptable levels during peak hours and the intersections of SR 227/Farmhouse Road and SR 227/Buckley Road are projected to operate at unacceptable levels under interim (2025) and future year (2035) conditions. The SLOCOG SR 227 Operations Study also determined that, under current conditions, all SR 227 segments evaluated in the study fail in either one or both peak hour periods (A.M./P.M.) and are projected to degrade under future year (2035) conditions. Any addition of traffic to cumulative conditions as a result of the project would result in potentially significant cumulative intersection and roadway impacts. Therefore, impacts associated with cumulative plus project conditions would be potentially significant. As described in the Regulatory Setting, the County of San Luis Obispo Department approved the SR 227 Road Improvement Fee Program to mitigate traffic impacts from new development occurring within the SR 227 corridor in October 2017. Any new development within the SR 227 Road Improvement Fee Program Fee Area or any other projects that contribute to traffic on SR 227 are considered by the County to have a considerable contribution to cumulative impacts to the corridor operations. The project is within the designated fee area and, therefore, would result in a considerable contribution to the identified cumulative impacts.

As discussed under Impact T-1 and shown in Table 37 and Table 38, the intersections nearest to the project site, including the SR 227/Los Ranchos Road and SR227/Crestmont Drive intersections, would operate at acceptable conditions (LOS C or better) during weekday AM and PM peak hours with implementation of either of the two corridor concept alternatives evaluated in the SR 227 Operations Study. The project applicant would be required to enter into the Road Improvement Fee Agreement with the County Department of Public Works prior to issuance of development permits for the project for payment of fair share road improvement fees. As described under Impact T-1 above, the County has determined that the fees collected would effectively advance construction of the preferred Roundabout Corridor Concept, identified in the SR 227 Operations Study as necessary to improve operations in the corridor to an acceptable level. Therefore, with compliance with the requirements of the SR 227 Corridor Road Improvement Fee Program and payment of applicable fees, the project's contribution to cumulative intersection and roadway impacts would be reduced below thresholds and would be less than significant.

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4.12 Wastewater

4.12.1 Setting

a. Wastewater Collection and Treatment

The County Service Area No. 18 (CSA 18) provides wastewater collection and treatment services to San Luis Obispo County residents and business in the vicinity of the project site. Treated wastewater from the CSA-18 plant is discharged to a blending pond, and is then used by the San Luis Country Club as a source of irrigation water for the golf course.

Currently, there is no existing sanitary sewer infrastructure on the project site. Annexation into CSA 18 is proposed for sewer service to all proposed lots. The project would provide for upgrades to the existing treatment plant facility. Domestic wastewater would be collected in a below-grade gravity collection system and transported to the CSA 18 facility through connection to the existing sewer line at Greystone Place.

b. Regulatory Setting

The regulatory setting for wastewater is comprised of state and local laws and policies, as discussed below.

California Code of Regulations, Title 22 – Safe Drinking Water Standards

The California Department of Public Health (CDPH), the State Water Resources Control Board (SWRCB), and the Regional Water Quality Control Boards (RWQCBs) ensure that the State's water resources are protected through federal, state, and local legislation. The California Code of Regulations, Title 22 – State Drinking Water Standards is the primary body of state legislation providing water system standards, including standards for water supply, storage capacity, and water quality. The Safe Drinking Water Act, administered by the U.S. Environmental Protection Agency (EPA), set Maximum Contaminant Levels for substances in drinking water.

Title 22 also contains effluent requirements for four levels of wastewater treatment, from un-disinfected secondary recycled water to disinfected tertiary recycled water, depending on the use of the treated wastewater. Higher levels of treatment have higher effluent standards, allowing for a greater number of uses under Title 22, including irrigation of freeway landscaping, pasture for milk animals, parks and playgrounds, and vineyards and orchards for disinfected tertiary recycled water.

Waste Discharge Requirements

The RWQCB sets the specific requirements for community and individual wastewater treatment and disposal and reuse facilities through Waste Discharge Requirements, required for wastewater treatment facilities under the California Water Code Section 13260. The CSA-18 wastewater treatment plant operates under the requirements of Recycled Water Requirements Order No. R3-2003-0004. A related order applies to the San Luis Country Club as the user of the recycled water. Previous violations related to salt content in the effluent from the CSA-18 treatment plant have led to a program of restricting the use of self-regenerating water softeners in the CSA service area. This program is implemented through public education and through codes, covenants and restrictions (CC&Rs) of the local Homeowners Association.

4.12.2 Impact Analysis

a. Methodology and Significance Thresholds

The following thresholds are based on the County's Initial Study, Initial Study Checklist, and Appendix G of the *State CEQA Guidelines*. Potential project impacts related to wastewater are considered to be significant in the project would:

1. Violate waste discharge requirements or Central Coast Basin Plan criteria for wastewater systems
2. Change the quality of surface or ground water (e.g., nitrogen-loading, day-lighting)
3. Adversely affect community wastewater service provider

Changes to the quality of surface or groundwater as a result of the project are address in Section 4.13, Water and Hydrology.

b. Project Impacts

Threshold:	Would the project violate waste discharge requirements or Central Coast Basin Plan criteria for wastewater systems?
Threshold:	Would the project adversely affect the community wastewater service provider?

Impact W-1 COMPLIANCE WITH THE CONDITIONS IN THE INTENT TO SERVE LETTER AND ASSOCIATED ATTACHMENTS WOULD ENSURE THAT THE PROJECT WOULD NOT VIOLATE APPLICABLE WASTE DISCHARGE REQUIREMENTS OR RESULT IN ANY ADVERSE EFFECTS TO CSA 18. IMPACTS ASSOCIATED WITH WASTEWATER TREATMENT AND COLLECTION FOR THE PROJECT WOULD BE CLASS III, LESS THAN SIGNIFICANT.

Currently, there is no existing sanitary sewer/wastewater infrastructure on the project site. The project site and 13 proposed residential lots would be annexed into CSA 18 for wastewater treatment service as part of the project. As indicated in the *Conditional Intent to Provide Waste Water Service Letter to Tract 2429, Jack Ranch* (Intent to Serve Letter; Appendix I), prepared by the San Luis Obispo County Department of Public Works, dated February 1, 2017, CSA 18 is ready and willing to provide wastewater service to the project site under the conditions stated in the Intent to Serve Letter. Accordingly, the project would involve the following, relative to wastewater collection and treatment:

- Design, construction, and installation of a gravity wastewater collector line, including all necessary system improvements, from the nearest existing connection point to the proposed residential development lots;
- Employment of a Registered Civil Engineer (RCE) to design the gravity wastewater collector line, manholes and associated appurtenances, and provide inspection during the course of construction to certify to the County Public Works Director that the improvements were installed in accordance with the improvement plans, and to submit as-built plans to the Public Works Director;
- Provision of 120 days of wet weather flow storage within the proposed development area;
- Submittal of plans and specifications to the Regional Water Quality Control Board for review, comment, and determinations with regard to the project and its impacts to applicable Waste Discharge Permits;

- Construction of all facilities in accordance with the County Standards and Specifications, CSA 18 regulations, and the San Luis Country Club Estates Home Owner's Association Rules and Regulations. [This condition would encompass the restriction on water softener discharge from individual residences]
- Provision of written correspondence from the San Luis Country Club Estates indicating the Club's willingness to accept any additional treated wastewater effluent generated by the project; and
- Payment of all applicable fees and funding suitable for the proposed wastewater collection and treatment infrastructure installment and necessary facilities improvements.

Compliance with the conditions as they are described in the Intent to Serve Letter and associated attachments would ensure that the project would not violate applicable waste discharge requirements or result in any adverse effects to CSA 18. Therefore, impacts associated with wastewater treatment and collection for the project would be less than significant.

c. Cumulative Impacts

Table 6 in Section 3.0, *Environmental Setting*, lists potential future development within the vicinity of the project site. By increasing the population and the number of structures in the County of San Luis Obispo, cumulative development in the area would increase the demand for wastewater collection and treatment services such that new or expanded infrastructure and facilities may be necessary. The project applicant as well as applicants for other projects approved in the County would be required to provide suitable funding to the County that would provide for improved services and facilities as necessary. The project is consistent with the County General Plan and service facilities have been planned to meet the additional service demand. Therefore, the project's contribution to cumulative impacts to wastewater collection and treatment services would be less than significant.

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4.13 Water and Hydrology

4.13.1 Setting

a. Existing Conditions

Water Quality

According to the Central Coast Regional Water Quality Control Board (RWQCB) 2016 Basin Plan, the site and vicinity are in the San Luis Obispo Valley Groundwater Basin (GW Basin No. 3-9 in RWQCB March 2016:Table 2-3) and the San Luis Obispo Creek Hydrologic Subarea (HSA 310.24 in RWQCB March 2016 Figure 2-1). Figure 23 shows the project site relative to the underlying groundwater basins.

The area proposed for development is generally on northeast facing slopes, and drainage from this area is towards the northeast, leading to an unnamed tributary of Davenport Creek. The tributary crosses through the vineyards in the northern portion of the property, and drains to the northwest where it meets Davenport Creek about 2,000 feet northwest of the property line. Davenport Creek flows westward, where it meets San Luis Obispo Creek on the east side of US 101, about 2.5 miles west of the project site.

The County's *Integrated Regional Water Management Plan* (IRWMP) provides additional information about the groundwater basin and water quality. The Jack Ranch SLO Agricultural Cluster Project site is within the San Luis Obispo Valley Sub-basin, which is within the San Luis Obispo/Avila Water Planning Area (Water Planning Area 6) defined in the IRWMP (San Luis Obispo County July 2014:Table C-2, and Figures C-8 and L-3). The San Luis Obispo Valley Sub-basin underlies approximately 8,000 acres.

The RWQCB *Basin Plan* identifies beneficial uses for surface and groundwater, and appropriate water quality objectives necessary to support those uses. Specific surface water and ground water quality objectives for San Luis Obispo Creek and its ground water basin are summarized in Table 39.

Table 39 Summary of Groundwater Quality Objectives

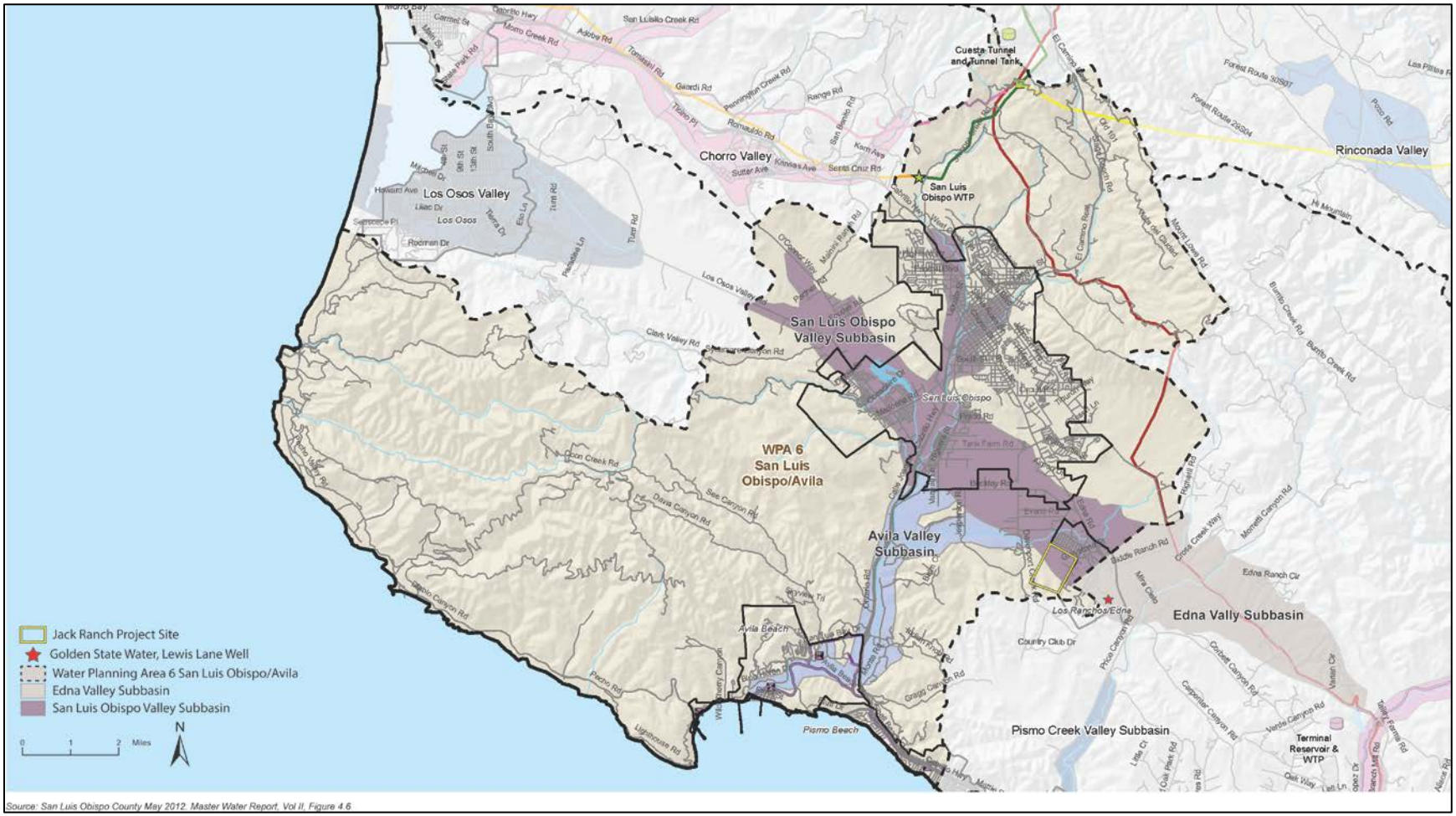
Constituent	Surface Water Quality Objective (mg/L)[a]	Groundwater Quality Objective (mg/L)[b]
Total Dissolved Solids (TDS)	650	900
Chloride (Cl)	100	200
Sulfate (SO4)	100	100
Boron (B)	0.2	0.2
Sodium (Na)	50	50
Nitrogen (N)	N/A	5

a. Objectives shown are annual mean values.

b. Objectives shown are median values based on data averages.

Source: RWQCB March 2016:Table 3-7 and Table 3-8)

Figure 23 Groundwater Basins



According to the County IRWMP (Table C-2), the groundwater in the San Luis Obispo Valley Sub-basin is characterized with TDS concentrations ranging from 320 to 630 mg/L—generally consistent with the water quality objectives in the *Basin Plan*.

Water Supply

The project site is located in the San Luis Obispo Valley Sub-Basin, as described above. The existing vineyards within the project site are irrigated by an on-site well and irrigation system.

Potable water for the proposed 13 residential lots would be provided by Golden State Water Company, which obtains water from a well located at 7035 Lewis Lane approximately 0.85 mile southeast of the project site. This well location is within the Edna Valley Sub-Basin of the larger San Luis Obispo/Avila Water Planning Area. The service area of Golden State Water Company is shown in Figure 24.

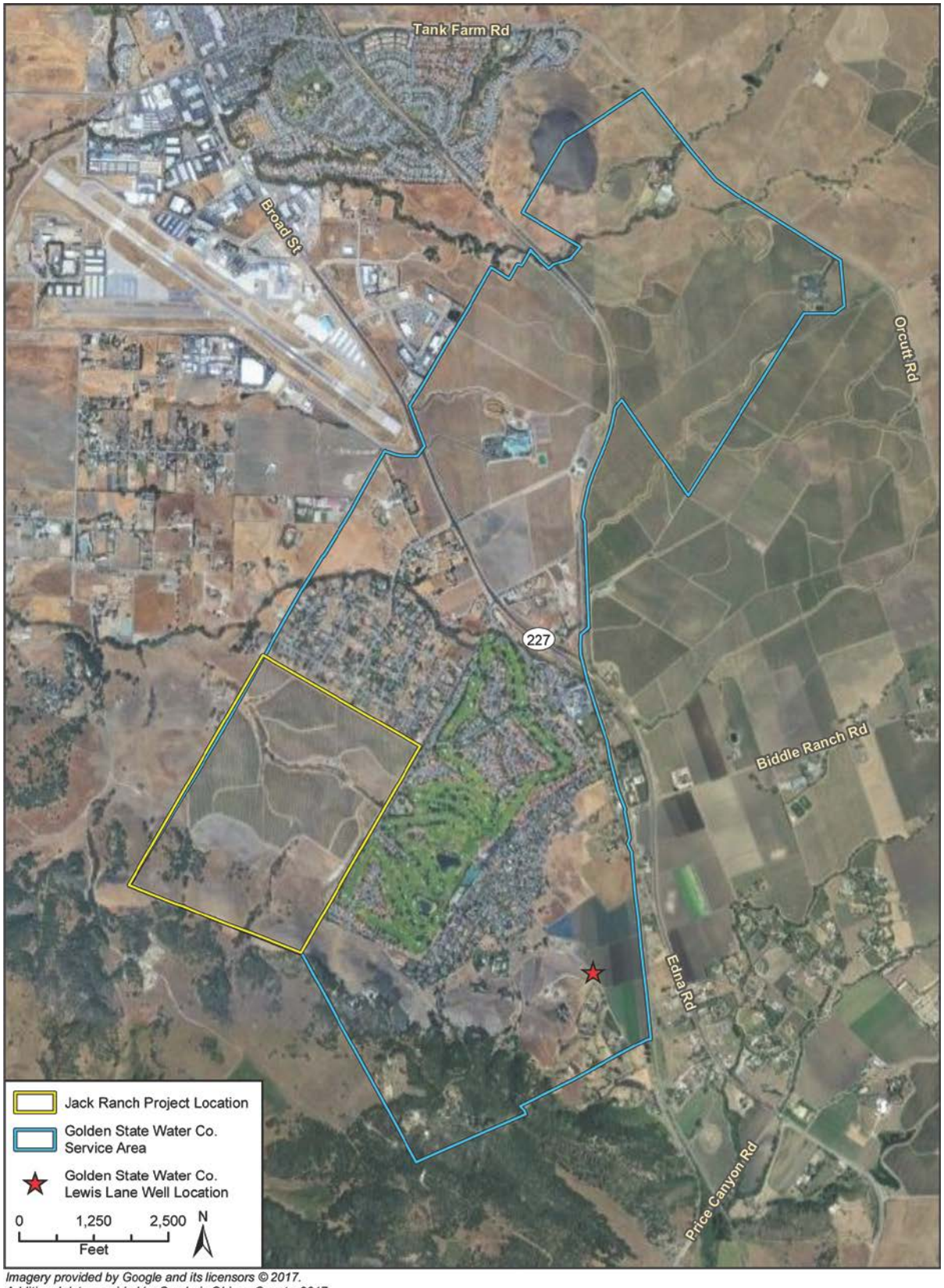
The Edna Valley Sub-basin serves limited urban development and agricultural users in the area. There are several agricultural and mutual water systems in the vicinity, including the East Valley Growers Mutual Water Company, Edna Ranch Mutual Water Company, and Varian Ranch Mutual Water Company, among others. The only domestic water purveyor in the Edna Valley Sub-basin is the Golden State Water Company. The County *IRWMP* lists the long-term sustainable yield in the Edna Valley sub-basin as ranging from 4,000-4,500 acre-feet per year (AFY). The aquifers within the Edna Valley Sub-basin are described in the IRWMP as alluvial deposits, the Paso Robles Formation, and underlying marine sands and shell beds, which reach depths of about 300 feet. This depth is slightly greater than that of the similar aquifers in the adjacent San Luis Valley Sub-basin, which extend to 150- to 200-feet deep (San Luis Obispo County July 2014:Table C-2, and Appendix L, pages 18-20).

As presented in the 2014-2016 *Annual Resource Summary Report* (San Luis Obispo County February 2017:Table II-14) the estimated supply for the Golden State Water Company in this sub-basin is 410 acre-feet per year. Current (2015-2016) water demand is 183 AFY, and the forecast demand for the next 20 years is 372 AFY. Because the service population is relatively small and the supply is forecast to be adequate for 20 years, there is no recommended level of severity for this sub-basin. This conclusion is consistent with the projections in the *Integrated Regional Water Management Plan* (San Luis Obispo County 2014:Table D-27) which includes agricultural users and rural users.

There are no specific evaluations of agricultural groundwater use for the San Luis Valley or the Edna Valley Sub-basins in any of the available County plans or reports. Instead, the Edna Valley and San Luis Valley Sub-basins are combined with the Avila Valley portion of the larger Water Planning Area 6 (see San Luis Obispo County July 2014:Appendix J). According to the County 2014 IRWMP, there were 1,248 acres of vineyards and approximately 1,012 acre-feet per year of water used for vineyard irrigation (based on a use rate of 0.81 AFY/acre of vineyard) within this larger area, including both San Luis Valley and Edna Valley Sub-Basins. The County Resource Management System Annual Resource Summary Report for 2014-2016 estimates a total agricultural use over the same area of 3,249 AFY, which includes all other crops as well as vineyards. This usage is expected to grow to 3,950 AFY by 2035 (the 20-year projection starting in 2015), and then to reduce to 3,466 AFY after another 10 years (San Luis Obispo County, February 2017:Table II-14).

In response to the recent drought years, a series of Executive Orders and regulations adopted by the State Water Resources Control Board have required increased water conservation efforts, particularly for those areas dependent on groundwater for supply. These orders and regulations are summarized in the Water Supply subsection of the Regulatory Setting in this section.

Figure 24 Golden State Water Company Service Area



Imagery provided by Google and its licensors © 2017.
Additional data provided by San Luis Obispo County, 2017.

The Golden State Water Company Edna Valley unit is considered a "small water supplier" under these State regulations (i.e. it serves fewer than 3,000 customers). For small water suppliers, the most recent emergency regulations require meeting a 25 percent conservation standard, or restricting outdoor irrigation to no more than two days per week through October 2016, and submittal of a small water supplier report that identifies monthly water production from December 2015 through August 2016 and confirms compliance with the other requirements.

Golden State Water prepared the water supplier report for the Edna Valley unit, and demonstrated monthly reductions in water use from 2013 to 2015 that ranged from 30 percent to 43 percent, and restricted domestic irrigation to two days per week for its customers. Information from this report indicates that for the six month period from June through November 2015, Golden State Water had 593 service connections in the Edna Unit serving a population of 1,957. Total deliveries for this period amounted to 120 acre-feet of water.

Effective November 2016, Golden State Water also implemented Stage 2 Mandatory Water Conservation and Rotation requirements for the Edna Valley Service area. This retained the limitation of irrigation to two days per week, and established the mandatory 25 percent reduction goal (relative to monthly use in 2013) for all of its customers (Golden State Water Company. September 29, 2016. Advice Letter No. 1669-W to the California Public Utilities Commission.

In April of 2017, an Executive Order from Governor Jerry Brown lifted the drought emergency provisions for most of the state. As a domestic potable supplier, however, Golden State Water retained the Stage 2 mandatory water conservation measures.

Other aspects of water supply planning, including the requirements of current state laws and regional planning are discussed in the Regulatory Setting in this section.

b. Regulatory Setting

Water Quality

Water quality regulations are based on the Federal Clean Water Act, and are implemented at the state level through the State Water Resources Control Board (SWRCB) and the RWQCB.

In order to achieve the water quality objectives, the RWQCB implements several regulatory programs prescribed by federal and state law. These include the issuance of Discharge Requirements that apply to point sources that release liquid to surface waters, and Waste Discharge Requirements to regulate the placement of solid waste on land that may lead to pollution of surface or groundwater, and other programs. When these orders include implementation of federal laws, they may be combined and include requirements under the National Pollutant Discharge Elimination System (NPDES), which addresses discharges to surface waters, including the management of stormwater runoff.

The County Service Area No. 18 (CSA-18) wastewater treatment plant, and the discharge of its treated water to the Country Club Estates golf course, operate under Recycled Water Requirements Order No. R3-2003-0004. For wastewater treatment service, the project site would annex to the CSA-18 service area. Additional information related to this topic is provided in Section 13. Wastewater.

A major set of regulations to maintain water quality in both surface and groundwater involves the control of stormwater runoff. These requirements originate at Section 402(p) of the Clean Water

Act, and relate to stormwater runoff from construction activities and from finished land development, as briefly summarized in the following paragraphs.

CONSTRUCTION ACTIVITIES

SWRCB Order No. 2009-0009 DWQ, NPDES No. CAS000002, the National Pollutant Discharge Elimination System (NPDES) General Permit For Storm Water Discharges Associated With Construction And Land Disturbance Activities. Subsequent amendment orders have clarified some of the details in this permit, but the 2009 order sets forth the basic requirements of this program. With some exceptions, the order applies to all development projects that grade or disturb more than one acre of land. All owners or discharges must file "Permit Registration Documents" with the SWRCB, which include a Notice of Intent to be covered by the permit, and for most projects a Stormwater Pollution Prevention Plan that meets the specifications of the order.

POST-DEVELOPMENT LAND USES

SRWRCB Order SWRCB Order No. 2013-0001-DWQ NPDES General Permit No. CAS000004, Waste Discharge Requirements (WDRs) For Storm Water Discharges From Small Municipal Separate Storm Sewer Systems (MS4s). This statewide order identifies the agencies (Counties and cities, and other entities) subject to the permit (including SLO County) and passes authority to the RWQCB. The local Region 3 RWQCB adopted Resolution No. R3-2013-0032, and various attachments and standards, which require the permittees to adopt regulations and meet monitoring requirements.

To implement these post-development requirements, the County adopted a Stormwater Management Program and added sections to its County Code to require post-construction design measures. These are found in Sections 19.11.030 (Building and Construction Code) and 22.10.155 (Land Use Ordinance). Although the figures in both of these County Code sections do not include the Jack Ranch SLO property within the mapped areas subject to the code requirements, the project site is covered. Section 19.11.030(a)(3) states that the code sections also apply to:

Any other areas identified as being subject to the stormwater standards, as indicated in "Attachment A" of the MS4 Phase II Permit.

"Attachment A" to the SWRCB Order (which is the MS4 Phase II Permit) includes a series of maps that indicate which "Watershed Management Zone" or WMZ applies to all areas covered by the permit. The Jack Ranch SLO Agricultural Cluster Project site is in WMZ 1 (as shown on pages 48 and 54, of Attachment A to SWRCB Order No. 2013-0001 DWQ). The performance requirements for WMA-1 involve retaining and infiltrating stormwater runoff associated with specific rainfall events, and other measures related to site design and maintenance.

Water Supply

PAST REQUIREMENTS

For most of California's history, the regulation of water supply was governed by English Common Law related to riparian water rights, and by a series of court cases in the State that interpreted and refined the application of law to the use of both surface and groundwater. The *Bulletin 118 Update 2003*, prepared by the California Department of Water Resources (DWR) gives a review of this historic period and how water supply regulations evolved in the State (DWR October 2003:Chapter 2 and Appendix B). Surface water in the State has been subject to a system of permitted rights since the early 1900s, but until very recently, the California Legislature had held that groundwater

management should remain a local responsibility. Thus, a patchwork of groundwater management arose, with three basic methods used throughout the state: (1) Some local agencies manage groundwater use through specific authority granted in the California Water Code; (2) other local governments regulate groundwater use through local ordinances or joint powers agreements; and (3) in some groundwater basins courts have adjudicated use and responsibilities among entities involved in groundwater management (DWR October 2003:page 32, 33). Throughout this process, multiple Water Master Plans, Integrated Regional Water Management Plans, and other water supply plans and studies have been prepared by local governments and water suppliers.

RECENT DROUGHT

During the most recent drought, the response by the State and local entities was directed through a series of Governor's Executive Orders and implementing orders and regulations by the DWR, State Water Resources Control Board, and other agencies. These orders and regulations began in 2013 when State water officials were ordered to review the potential for voluntary transfers of water and water rights, and a Drought Task Force was formed. In January 17, 2014 a State of Emergency was declared, and several measures were implemented including a call for statewide reduction in water use by 20 percent. On April 1, 2015, Executive Order B-29-15 called for mandatory water reductions of 25 percent. Subsequent orders by the California Water Resources Control Board, DWR regulations, and actions by other State agencies implemented mandatory conservation measures. In April, 2017, Executive Order B-40-17 terminated the declared drought emergency and rescinded some provisions related to mandatory conservation. However, direction to continue water conservation of potable urban water use (contained in Executive Order B037-16) was retained, and permanent restrictions against wasteful practices were established. Drought response activities also remained in effect in specified counties (none of which were in the Central Coast).

SUSTAINABLE GROUNDWATER MANAGEMENT ACT

During the recent drought (in 2014), the Legislature passed the Sustainable Groundwater Management Act (SGMA). The major function of this law was to establish a more uniform statewide program aimed at sustainable groundwater management. Provisions in the law to accomplish this goal included:

- Requiring the development and reporting of data necessary to support sustainable management
- Allowing the state to develop and implement an interim sustainable groundwater management plan until local agencies can assume management of a basin or sub-basin
- Granting the authority to local and regional agencies to develop and implement sustainable groundwater management plans

Specific deadlines for local agencies to manage groundwater basins under a groundwater sustainability plan (or plans) depend on the status of each basin, as defined in the prioritization by the DWR in Bulletin 118. For basins considered subject to critical overdraft, the plan adoption deadline is January 31, 2020. For basins designated as high or medium priority basins, the deadline is January 31, 2022. For other basins (low and very low priority), local agencies are encouraged to manage groundwater under a groundwater sustainability plan, but no specific mandate is established in the SGMA.

The SGMA did not alter existing proprietary rights to groundwater consistent with Section 1200 of the Water Code (addressing certain sub-surface flows associated with riparian waters), and did not affect groundwater in adjudicated basins. The act also recognized the authority of local

governments to manage groundwater consistent with their police powers (through local ordinances).

The San Luis Obispo Valley Basin is identified as a "medium priority" groundwater basin (DWR June 2014:Appendix A, Figure A4 and Table A-4 page 5). Thus, local agencies must complete a groundwater sustainability plan by January 31, 2022. The City and County of San Luis Obispo, and several local water providers including the Golden State Water Company, have formed a Groundwater Sustainability Agency to prepare this plan for the San Luis Obispo Valley Groundwater Basin (San Luis Obispo County December 5, 2017).

4.13.2 Impact Analysis

a. Methodology and Significance Thresholds

The specific issues and criteria used to identify potential impacts are based on the descriptions in the County Initial Study Checklist section on Water and Hydrology, which indicate that a project may have a significant impact relative to water quality f it would:

a. Violate any water quality standards?
b. Discharge into surface waters or otherwise alter surface water quality (e.g., turbidity, sediment, temperature, dissolved oxygen, etc.)?
c. Change the quality of groundwater (e.g., saltwater intrusion, nitrogen-loading, etc.)?
d. Create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide additional sources of polluted runoff?
e. Change rates of soil absorption, or amount or direction of surface runoff?
f. Change the drainage patterns where substantial on- or off-site sedimentation/ erosion or flooding may occur?
g. Involve activities within the 100-year flood zone?

With respect to water quantity – or the supply of water for the project from groundwater sources, the Initial Study Checklist indicates that a project may have a significant impact if it would:

a. Change the quantity or movement of available surface or ground water?
b. Adversely affect community water service provider?
c. Expose people to a risk of loss, injury or death involving flooding (e.g., dam failure, etc.), or inundation by seiche, tsunami or mudflow?

In evaluating each of the above issues, the primary method involves confirmation that the project is subject to specific regulatory programs and standards, and that its design and operation is expected to comply with applicable standards.

b. Project Impacts

Threshold:	Would the project violate any water quality standards?

Impact WH-1 THE PROJECT IS NOT EXPECTED TO VIOLATE ANY WATER QUALITY STANDARDS. PROJECT EFFECTS ON WATER QUALITY WOULD BE CLASS III, LESS THAN SIGNIFICANT.

The project is subject to County Code requirements set forth in Chapter 19.11 (Buildings and Construction, Stormwater Management) and Sections 22.10.155 (Land Use Ordinance Stormwater Management). These require compliance with the statewide construction stormwater permit and with the statewide permit regulating discharges from developed areas. Wastewater from the project would be treated by the CSA-18, and subject to the County requirements for annexation to the CSA, and the discharge would be subject to the Discharge Requirements issued to the CSA.

The project design includes stormwater retention and infiltration ponds and LID features, and a separate wet weather storage pond. Onsite drainage facilities will be installed in conjunction with the site preparation work and construction of the private access road and drive. Confirmation of these designs will occur prior to issuance of grading or building permits. Thus, the effects of the project construction and the final development on water quality would be less than significant.

Threshold:	Would the project Discharge into surface waters or otherwise alter surface water quality (e.g., turbidity, sediment, temperature, dissolved oxygen, etc.)?

Impact WH-2 THE PROJECT IS NOT EXPECTED TO DISCHARGE INTO SURFACE WATERS OR ADVERSELY AFFECT WATER QUALITY. THIS IMPACT WOULD BE CLASS III, LESS THAN SIGNIFICANT.

County code, and the requirements of the SWRCB General permit for construction activities, require the use of Best Management Practices in the preparation of a Stormwater Pollution Prevention Plan to be implemented during construction. The proposed grading and construction is limited to the relatively small area of the proposed 13 residential lots and driveway and drainage improvements associated with them. Thus, the project would disturb only about 25 acres of the nearly 300 acre site. The project design includes LID features to address the permanent effect of the development on drainage, and the areas for development would be approximately 1,000 feet from the closest point of the small tributary creek on the property. For these reasons the effect of the project on surface waters would be less than significant.

Threshold:	Would the project change the quality of groundwater (e.g., saltwater intrusion, nitrogen-loading, etc.)?

Impact WH-3 THE PROJECT WOULD NOT CHANGE THE QUALITY OF GROUNDWATER THROUGH EXCESSIVE WITHDRAWALS, NITROGEN LOADING, OR OTHER FACTORS. THIS IMPACT WOULD BE CLASS III, LESS THAN SIGNIFICANT.

As described in the issues above, the project design must include measures to address stormwater runoff during construction, and after development of the proposed 13 residential lots. The overall footprint of the project is small relative to the size of the parcel. The increased demand for water caused by the development of the proposed 13 residential lots is within the capacity of the groundwater basin, and the project would not cause any substantial changes to the groundwater elevation or to the quality of groundwater. For these reasons, the effect of the project on groundwater quality 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 WH-4 THE PROJECT WOULD CREATE A SLIGHT INCREASE IN RUNOFF BUT WOULD NOT EXCEED THE CAPACITY OF STORMWATER SYSTEMS OR CAUSE SUBSTANTIAL POLLUTION. THIS IMPACT WOULD BE CLASS III, LESS THAN SIGNIFICANT.

There are no municipal stormwater drainage facilities on the project site. Currently, runoff from the proposed development area occurs via sheet flow and within shallow swales that lead to the tributary creek crossing the vineyards onsite, approximately 1,000 feet north of the proposed residential lots. The overall pattern of runoff will not be affected by the project, other than by providing retention ponds or LID features to maintain or increase infiltration rates. Thus, the project effect on stormwater systems or stormwater pollution would be less than significant.

Threshold:	Would the project change rates of soil absorption, or amount or direction of surface runoff?

Impact WH-5 THE PROJECT WOULD NOT SUBSTANTIALLY AFFECT SOIL ABSORPTION OR SUBSTANTIALLY AFFECT THE AMOUNT OR DIRECTION OF SURFACE RUNOFF. THIS IMPACT WOULD BE CLASS III, LESS THAN SIGNIFICANT.

Development of the project would involve the construction of a private access road and drive, and 13 new residential lots. This development would slightly reduce the soil absorption in the project area, but the effect would be very minor since the total development area (about 25 acres) is small relative to the project site (about 300 acres). The project design includes LID features to retain and infiltrate stormwater runoff within the site. This design approach would minimize the effects on surface runoff, and result in a less than significant impact.

Threshold:	Would the project change the drainage patterns where substantial on- or off-site sedimentation/ erosion or flooding may occur?

Impact WH-6 THE PROJECT WOULD NOT SUBSTANTIALLY CHANGE DRAINAGE PATTERS OR EFFECT ON- OR OFF-SITE SEDIMENTATION/EROSION OR FLOODING. THIS IMPACT WOULD BE CLASS III, LESS THAN SIGNIFICANT.

As discussed above in Impacts 1-5, the extent of proposed development is small relative to the size of the property. The proposed lots and access drives, including the ponds and other LID features, would occupy only about 25 acres of the 300-acre property. The remaining land would be retained in vineyards and natural open space. The project design would retain the overall drainage pattern in the vicinity. The combination of the small development area, retention of agricultural and open space areas, and compliance with applicable requirements for stormwater control during construction and in the finished development, result in a less than significant impact relative to sedimentation/erosion or flooding.

Threshold:	Would the project Involve activities within the 100-year flood zone?

Impact WH-7 THE PROJECT WOULD NOT INVOLVE ANY ACTIVITIES WITHIN THE 100-YEAR FLOOD ZONE. PROJECT EFFECTS RELATED TO FLOODING WOULD BE CLASS III, LESS THAN SIGNIFICANT.

The project site is not located within a mapped 100-year flood zone. The project site is within the area mapped in Panel 06079C1334f by the Federal Emergency Management Agency (FEMA). Although there is no printed map for this panel, inspection of the FEMA on-line mapping tool indicates that the nearest mapped 100-year floodplain is along Davenport Creek, over 2,000 feet northwest from the proposed development area. Thus, the project would have no significant impacts related to the 100-year flood plain.

Threshold:	Would the project change the quantity or movement of available surface or ground water?

Impact WH-8 THE PROJECT MAY AFFECT THE QUANTITY OR MOVEMENT OF AVAILABLE SURFACE OR GROUNDWATER. PROJECT EFFECTS RELATED TO AVAILABLE WATER QUANTITY WOULD BE CLASS III, LESS THAN SIGNIFICANT.

The project would be served with potable water by the Golder State Water Company. Using the most recent information available for the number of connections (about 600) and total water deliveries (183 AFY) would yield an average use rate of under 0.4 AFY per customer. A higher consumption rate of just under 0.7 AFY per customer may be estimated based on information from the San Luis Obispo County *Master Water Report* (San Luis Obispo County May 2012:Appendix C, Technical Memorandum No. 3, page 35). This higher rate is based on 712 connections and a total withdrawal for this system of 482 AFY by the year 2030. The estimated consumption rate from the *Master Water Report* is higher (i.e. more conservative) and used herein to estimate the project's domestic water consumption. For the 13 new connections in the project, this would equate to 9.1 AFY of new water consumption, or a total withdrawal of groundwater by Golden State Water of under 200 AFY.

Agricultural water use by the existing 145 acres of vineyards amounts to approximately 117.5 AFY (based on the vineyard use rate of 0.81 AFY/year used in the County *IRWMP* Appendix J, as discussed above). The addition of 18 acres of new vineyards as part of the proposed Agricultural Cluster development permit would result in an additional 14.5 AFY of water consumption. Both of these consumption figures are part of the County's longer range estimates of agricultural water use in this Water Planning Area, which range from the current 3,249 AFY to 3,950 AFY in the year 2035.

The following points summarize the above discussions:

- The projected withdrawals by Golden State Water Company and by existing and projected agricultural uses in the vicinity are within the estimated safe yield in the Edna Valley basin (approximately 4,000 AFY).
- With implementation of the project, the groundwater use projected by the Golden State Water Company in the most recent County Annual Resource Summary Report (372 AFY), would remain within the longer-range withdrawal estimates (from 434 to 482 AFY in the Master Water Report and IRWMP).
- As a domestic water purveyor, Golden State Water Company has retained the Stage II water conservation requirements, which include restrictions on days of household landscape irrigation as well as other conservation measures required by state law.

- The County of San Luis Obispo has formed a Sustainable Groundwater Management Agency, along with the City of San Luis Obispo, Golden State Water Company, and other water suppliers in the region, in order to develop reporting and planning measures necessary to help ensure that groundwater use in the San Luis Valley and Edna Valley Sub-Basins will avoid substantial overdraft.

For these reasons, the anticipated groundwater use from the project would represent a less than significant Impact.

Threshold:	Would the project adversely affect community water service provider?

Impact WH-9 THE PROJECT WOULD NOT ADVERSELY AFFECT A COMMUNITY WATER SERVICE PROVIDER. PROJECT EFFECTS RELATED TO WATER SUPPLY WOULD BE CLASS III, LESS THAN SIGNIFICANT.

The project would extend the mainline from Greystone Place to the proposed project with a new 8-inch water main. Fire hydrants would be installed in accordance with County standards and CALFIRE requirements. The water demand of the project is expected to be within the capacity of Golden State Water. As noted in the previous issue, the project water demand would be within the capacity of the groundwater basin. For these reasons, the project would result in a less than significant impact on the local water supplier.

Threshold:	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?

Impact WH-10 THE PROJECT WOULD NOT EXPOSE PEOPLE TO RISK INVOLVING FLOODING FROM ANY SOURCE. PROJECT EFFECTS RELATED TO RISK OF FLOODING WOULD BE CLASS III, LESS THAN SIGNIFICANT.

The project is outside of any mapped 100-year flood plain areas (as discussed above in Impact 7). It is not located downstream from any dams, and is not near any ocean or lake shoreline. For these reasons the risk from flooding from any source would be less than significant.

4.14 Land Use and Planning

4.14.1 Setting

a. Regional Setting

The project site is located in unincorporated San Luis Obispo County, which occupies approximately 3,600 square miles of both urban and rural land uses. Specifically, the project site lies in an unincorporated area, 2.5 miles south of the San Luis Obispo City limits. The City is the commercial, governmental, and cultural center for the region and is the largest incorporated city between the City of Santa Maria to the south and the City of Salinas to the north. Agricultural valleys and open space surround most of the City, including vineyards and field crops, scrub oak, and grassland biological communities.

b. Project Site Vicinity Setting

The 299-acre project site consists of approximately 163 acres of existing vineyards and associated access roads, of which approximately 145 acres are currently planted with vines. An additional approximately 11.6 acres of recently cleared area, immediately adjacent to existing vineyards, were planted with a barley cover crop in 2017. An unnamed intermittent tributary to Davenport Creek crosses through the existing vineyards, draining southeast to northwest, bordered by the vineyards on either side (Refer to Figure 4). The majority of the site is characterized by gentle slopes on either side of the intermittent tributary to Davenport Creek, planted with vineyards. Approximately 106 acres in the southwestern portion of the site consists of natural vegetation communities. This area is steeper and contains grassland and oak woodland vegetation.

The project is bounded by Caballeros Avenue on the northeast (Rolling Hills Development), Greystone Place to the east (San Luis Obispo Country Club Estates), and large lot agricultural land to the south and west, with open space beyond.

The project site is within San Luis Obispo Sub Area North as designated in the County's San Luis Obispo Area Plan in *Part II of the Land Use and Circulation Elements (LUCE): The Area Plans*. The site is in the Agriculture and Rural Lands categories, with the Sensitive Resource Area (SRA) combining designation over the hillsides in the southern portion of the site. Table 2-1 Existing Site Information (in Section 2.0, *Project Description*) summarizes the existing land use and regulatory characteristics of the site.

c. Regulatory Setting

The County Land Use Ordinance and General Plan elements as well as the local Clean Air Plan regulate land use planning in the County of San Luis Obispo. The applicable policies and requirements of each of these regulatory documents and the project's consistency with these requirements are described throughout Section 4.0 of this EIR and summarized below.

4.14.2 Impact Analysis

a. Methodology and Significance Thresholds

Land use compatibility impacts were assessed based upon the level of physical impact anticipated in the various issues that can affect compatibility (i.e., aesthetics, air quality, noise, and circulation), as

well as consistency with adopted plans, policies, and regulations. These thresholds are augmented by those contained in Sections 4.1, *Aesthetics*, 4.2, *Agriculture and Forest Resources*, 4.3, *Air Quality*, 4.9, *Noise*, and 4.12, *Transportation and Circulation*.

The following criteria are based on Appendix G of the *State CEQA Guidelines*. The effects of the project on land use are considered to be significant if the project would:

1. Be potentially inconsistent with 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.

Potential inconsistencies with applicable land use policies and regulations are summarized below while potential inconsistencies with any local policies or ordinances protecting biological resources, and habitat or community conservation plans, are addressed in Section 4.4, Biological Resources. Therefore, project consistency with an applicable habitat or community conservation plan is not discussed further in this section.

b. Project Impacts

Threshold:	Would the project be potentially inconsistent with 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?
Threshold:	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 INCLUDED IN THE COUNTY'S GENERAL PLAN, LAND USE ORDINANCE, AND CLEAN AIR PLAN. THEREFORE, THE PROJECT WOULD RESULT IN CLASS III, LESS THAN SIGNIFICANT, IMPACTS RELATED TO LAND USE AND POLICY/REGULATION OF THE PROJECT AREA.

Land use impacts are assessed based on the physical effects related to land use compatibility (e.g., air quality, agricultural resources, aesthetics, noise, and transportation and circulation) and consistency with adopted plans, policies, and regulations. The following discussion provides a summary of relevant plans, policies, and regulations and the potential consistency of the project with each. Additionally, a discussion of the project's consistency with plans, policies, and regulations for the specific issue areas to which they apply can be found throughout the respective subsections in Section 4.0 of this EIR.

It should be noted that the discussion below is intended to guide policy interpretation, but is not intended to replace the County decision-making process. The final determination of consistency will be made by County Planning Commission when they act on the project. The General Plan consistency determination is based on the project's overall consistency with the County General Plan rather than strict adherence to every single principle and policy of each General Plan element.

Land Use Element

The Land Use Element (LUE) is a plan describing the official County policy on the location of land uses and their orderly growth and development. The LUE has three parts: Framework for Planning – Inland Area, the Area Plans, and the Official Maps. Framework for Planning contains principles and policies that apply to the unincorporated area outside the coastal zone, defining how the LUE is used together with the Land Use Ordinance and other adopted plans. The Area Plans refine the general policies of Framework for Planning into separate land use issues and policies for each community. The project site is located within the designated San Luis Obispo Sub Area North in the Area Plans. The Official Maps are the zoning maps for the unincorporated areas of the County. They identify land use categories and combining designations.

The project site is in the Agriculture and Rural Lands categories, with the SRA combining designation over the hillsides in the southern portion of the site. As described in the LUE, the Agriculture land use category is intended to:

a. Recognize and retain commercial agriculture as a desirable land use and as a major segment of the county's economic base.
b. Designate areas where agriculture is the primary land use with all other uses being secondary, in direct support of agriculture.
c. Designate areas where a combination of soil types, topography, water supply, existing parcel sizes and good management practices will result in the protection of agricultural land for agricultural uses, including the production of food and fiber.
d. Designate areas where rural residential uses that are not related to agriculture would find agricultural activities a nuisance, or be incompatible.
e. Protect the agricultural basis of the county economy and encourage the open space values of agriculture to continue agricultural uses, including the production of food and fiber.
f. Recognize that agricultural activities on a small scale can supplement income from other sources, particularly where older subdivisions have resulted in parcels smaller than would currently qualify for new subdivisions within the parcel size range for the Agriculture category.
g. Support conversion of agricultural lands to other uses only when such conversion would be appropriate or because the continuing agricultural productivity of a specific site is infeasible, considering the factors in purpose statement c, above.
h. Give high priority to the protection of commercial prime and nonprime agricultural soils where the commercial viability, siting (whether inside or outside urban reserve lines), and natural resources allow for agricultural uses, including the production of food and fiber.

As described in the LUE, the Rural Lands land use category is intended to:

a. Encourage rural development at very low densities that maximizes preservation of open space, watershed and wildlife habitat areas.
b. Retain large parcel sizes where rural residences may be established on lands having open space value but limited agricultural potential.
c. Maintain low population densities in rural areas outside of urban and village reserve lines where an open and natural countryside with very low development intensity is preferred.
d. Establish areas where non-agricultural activities are the primary use of the land, but where agriculture and compatible uses may co-exist.

As described in the LUE, the SRA combining designation is intended to:

1. Identify areas of high environmental quality, including but not limited to important geologic features, wetlands and marshlands, undeveloped coastal areas and important watersheds.
2. Enhance and maintain the amenities accruing to the public from the preservation of the scenic and environmental quality of San Luis Obispo County.
3. Provide for review of proposed alterations of the natural environment and terrain in areas of special ecological and educational significance.
4. Identify for the purposes of the Land Use Element certain areas defined as "Open Space Lands" in the county Conservation and Open Space Element, or areas with unique or endangered resources as identified by local, state, or federal governments.
5. Provide locational and design guidelines for siting development that may occur within Sensitive Resource Areas, and encourage development to occur outside of SRAs whenever possible so as to preserve the scenic and environmental qualities of San Luis Obispo County, while retaining the ability to establish proposed land uses and minimum parcel sizes as allowed by the Land use Ordinance.

The Agriculture and Rural Lands categories as well as the SRA combining designation fulfill the open space zoning requirements of the County Government Code. Based on Sections 22.22.040 (Agricultural Category), 22.22.050 (Rural Lands Category), and 22.22.150 (Agricultural Lands Clustering) of the Land Use Ordinance and the County's prescribed intentions for the land use categories and combining designation on the site, the County Department of Planning and Building determined that a 13-lot subdivision is allowable for this project given the agriculture and rural lands within the project boundaries. The project as proposed would avoid development in areas of existing agricultural production, would expand the productivity of on-site prime agricultural land by expanding the on-site vineyards, and would preserve 95 percent of the site in open space/agriculture. Additionally, in compliance with County policies for protecting scenic views and landscapes from incompatible development and land uses in the SRA, none of the proposed residential units would protrude above the ridgelines on the project site. As such, the project was designed to meet the intentions of and, thus, be consistent with the land use categories and combining designations that cover the project site. Therefore, the project would not result in inconsistencies with the Land Use Element and potential impacts would be less than significant.

Land Use Ordinance

The Land Use Ordinance is established to implement the General Plan, to guide and manage the future growth in the County, to regulate land uses, to minimize adverse effects resulting from inappropriate land development, and to protect and enhance significant resources within the County.

AGRICULTURAL LANDS CLUSTERING ORDINANCE

As a proposed agricultural cluster subdivision, the project is subject to the County's Agricultural Lands Clustering Ordinance (Land Use Ordinance Section 22.22.150). The intent of the Ordinance is to preserve and enhance agricultural uses, while allowing clustered residential development on large parcels, subject to certain findings being made. The required findings are as follows:

1. The proposed project will result in the continuation, enhancement and long-term preservation of agricultural operations consisting of the production of food and fiber on the subject site and in the surrounding area.
2. The proposed project has been designed to:
    a. Locate proposed development to avoid and buffer all prime agricultural soils on the site, other agricultural production areas on the site, as well as agricultural operations on adjoining properties;
    b. Minimize to the maximum extent feasible the need for construction of new roads by clustering new development close to existing roads;
    c. Avoid placement of roads or structures on any environmentally sensitive habitat areas;
    d. Minimize impacts of non-agricultural structures and roads on public views from public roads and public recreation areas;
    e. Cluster proposed residential structures to the maximum extent feasible so as to not interfere with agricultural production and to also be consistent with the goal of maintaining the rural character of the area;
    f. Minimize risks to life and property due to geologic, flood and fire hazard and soil erosion.
3. The proposed project will not result in any significant adverse social impacts affecting on-site or off-site agricultural operations, including but not limited to trespass, vandalism, and complaints about agricultural practices.
4. The water resources and all necessary services are adequate to serve the proposed development, including residential uses as well as existing and proposed agricultural operations on the subject site and in the site vicinity.
5. The proposed clustered development and the conditions, covenants and restrictions governing the Homeowners Association and/or individual lots are adequate to ensure permanent maintenance of the lands remain in agricultural production and/or open space.

As described above under the discussion of project consistency with the County's Land Use Element and in Section 4.2, *Agriculture and Forest Resources*, the project was designed as a 13-lot Major Agricultural Cluster project to meet the requirements of Section 22.22.150 of the Land Use Ordiannce in effect in 2001, when the project was accepted for processing. Specifically, because the project would avoid development in areas of existing agricultural production, would expand the productivity of on-site prime agricultural land by expanding the on-site vineyards, and would preserve 95 percent of the site in open space/agriculture, the project would be consistent with the Land Use Ordinance.

CLEAN AIR PLAN

The project site is within the South Central Coast Air Basin (SCCAB), which includes all of San Luis Obispo, Santa Barbara, and Ventura Counties. The 2001 Clean Air Plan (CAP) for San Luis Obispo County describes the air quality setting for the County in detail, including the local climate and meteorology, current and projected air quality, and the regulatory framework for the management of air quality. The determination of the whether the project would conflict with or obstruct implementation of the SLOAPCD 2001 CAP is based on the project's consistency the CAP. As discussed in Section 4.3, *Air Quality*, the project would not result in an exceedance of the population

projections contained in the 2001 CAP, conflict with the VMT assumptions in the 2001 CAP, and would result in development within five miles of the urban area of the City of San Luis Obispo consistent with the provisions of the Agricultural Lands Clustering Ordinance. As such, the project would be indirectly consistent with the land use and planning strategies and goals for the County and the 2001 CAP, despite being rural in nature. For these reasons, the project is determined to be consistent with and, thereby, would not conflict with or obstruct implementation of the SLOAPCD 2001 CAP.

OTHER GENERAL PLAN ELEMENTS

The Agriculture Element, Circulation Element, Conservation and Open Space Element, Economic Element, Housing Element, Noise Element, Parks and Recreation Element, and Safety Element also contain policies that would apply to the project. Project consistency with the issues regulated by specific policies in these General Plan elements is described throughout Section 4.0 of this EIR.

Threshold:	Would the project be potentially incompatible with surrounding land uses?

Impact LU-2 THE PROJECT WOULD ALTER THE PRESENT LAND USE ON THE PROJECT SITE RESULTING IN POTENTIAL INCOMPATIBILITIES WITH SURROUNDING USES. THIS IMPACT WOULD BE CLASS II, LESS THAN SIGNIFICANT WITH INCORPORATION OF MITIGATION.

Land Use Designations

Approximately 145 acres of the project site are currently in use as active agriculture, which will be expanded by approximately 18 acres for a total of 163 acres in agricultural use upon project implementation. Approximately 122 acres of the site will remain as natural open space, while the remaining 14.2 acres would be developed with 13 residential lots (approximately one acre each), internal roadways, and infrastructure improvements. The proposed lots would each allow one single-family detached residential unit. The Vesting Tentative Tract Map (VTTM; Tract 2429) application has been submitted under the County's Agricultural Lands Clustering Ordinance (Section 22.22.150 of the Land Use Ordinance) which allows for up to five percent of the gross parcel area to be used for clustering lots. Accordingly, the project would be developed consistent with development and agricultural uses in the surrounding area and as expected in the County's planning documents.

Land Use Compatibility

Proposed development could introduce potential incompatibilities between new on-site, and existing on- and off-site uses, such as noise and air contaminant emissions from construction activities, lighting and glare, and those associated with agriculture operations near residences. Refer to Section 4.1, *Aesthetics*, Section 4.3, *Air Quality*, and Section 4.9, *Noise*, for impact discussions related to light and glare, noise, and air contaminant emissions from construction activities. Section 4.2, *Agriculture and Forest Resources*, discusses compatibility impacts between agriculture and non-agriculture uses in detail. In general, the project site would be developed in manner consistent with surrounding area development and uses.

Visual Compatibility

The proposed development is located on a hillside just below the SRA combining designation that was designated onsite because of the scenic value of the hillside. The placement of the SRA roughly

coincides with the area that is most visually sensitive from the nearest viewing corridor, State Route (SR) 227. Although the project is outside of the SRA, portions of the development will be intermittently visible from the SR 227 corridor heading north or south. However, in compliance with County policies, none of the proposed residential units would protrude above the ridgelines on the project site. In addition, the proposed residential units would also be consistent with the appearance, mass, and density of surrounding rural development.

Light and Glare

Currently, there is little to no existing night lighting on the project site and there is limited nighttime lighting within residential areas near the site. Implementation of the project could include lighting that could be visible from the residences located to north and east of the site. Entry lights and interior lights have the potential to adversely affect nearby residences and degrade the nighttime view of the area. In addition, on-site building materials, roofing materials, and windows reflecting sunlight could produce glare. However, the project would be required to comply with the County's Exterior Lighting Standards (Section 22.10.060 of the Land Use Ordinance) which prohibits light or glare from being transmitted or reflected such that it is detrimental or harmful to persons, or interferes with the use of surrounding properties or streets.

Air Quality

As discussed in greater detail in Section 4.3, *Air Quality*, construction-related air quality impacts to adjacent sensitive receptors are considered less than significant with the incorporation of required SLOAPCD dust control measures, such as watering construction sites, limiting construction vehicle speeds on unpaved roadways, and covering trucks hauling dirt, sand, soil, or other loose materials.

Noise

As described in Section 4.9, *Noise*, construction activity associated with development of the proposed lots would generate noise levels above County thresholds affecting sensitive receptors adjacent to the site. These construction impacts would be short-term and primarily related to grading and construction vehicle traffic, and would be considered Class II, potentially significant, but mitigable. Required mitigation measures and conditions of approval would limit the time of day and days of operation and would require proper maintenance of construction equipment.

Mitigation Measure

The mitigation measures included in Section 4.9, *Noise*, compliance with standard SLOAPCD dust control and operational emissions control measures, structural height limitations, and compliance with County agricultural buffer policies and exterior lighting standards would reduce and/or avoid the potential for compatibility conflicts.

Significance After Mitigation

Mitigation measures identified in Section 4.9, *Noise*, compliance with standard SLOAPCD dust control and operational emissions control measures, structural height limitations, and compliance with County agricultural buffer policies and exterior lighting standards would reduce potential land use incompatibility impacts to less than significant levels.

c. Cumulative Impacts

Cumulative development throughout the greater San Luis Obispo County area would gradually alter the area's rural character. The proposed project would incrementally contribute to this change. Additionally, individual development projects in the region would have the potential to create compatibility conflicts relating to the interface of existing urban and rural uses and new urban development. Such conflicts are expected to be addressed on a case-by-case basis, and assuming that conflicts can be resolved through the proper use of buffers and appropriate design. Project consistency with local plans and policies guiding land use and development and incorporation of mitigation for land use and compatibility impacts to specific environmental resources such as aesthetics, air quality, agricultural resources, and noise, would reduce the projects contribution to cumulative land use impacts associated with planned and pending development in the region.

4.15 Impacts Found to be Less than Significant

This section addresses the potential environmental effects of the project that were determined to be less than significant, as described in the Initial Study (IS) for the project (refer to Appendix A). The items listed below are contained in the City's IS environmental checklist form and the environmental checklist form included in Appendix G of the *State CEQA Guidelines*. Each subsection listed below includes the checklist items from the *State CEQA Guidelines* that are addressed in this section. Any items not addressed in this section have been addressed in Section 4.0, *Environmental Impact Analysis*, of this EIR. Section 4.0 also includes an expanded discussion of the settings under each environmental issue area discussed therein.

The Initial Study determined that the project would not result in adverse impacts related to Agriculture and Forest Resources, Mineral Resources, Population/Housing, Public Services, or Recreation. A summary of the analysis of issue areas for which no significant adverse impacts were identified is provided in this section. Refer to the Initial Study (Appendix A) for the complete issue area analysis.

4.15.1 Population/Housing

Would the project:

- Induce substantial population growth in an area, either directly (for example, by proposing new homes and businesses) or indirectly (for example, through extension of roads or other infrastructure);
- Displace substantial numbers of existing housing, necessitating the construction of replacement housing elsewhere; and/or
- Displace substantial numbers of people, necessitating the construction of replacement housing elsewhere?

The County of San Luis Obispo covers approximately 3,600 square miles, and contains approximately 280,100 residents (DOF 2017). The project application includes a Vesting Tentative Tract Map (VTTM; Tract 2429), and a Conditional Use Permit (CUP) to allow a 13-lot major Agricultural Cluster Project, consistent with Section 22.22.150 of the County Land Use Ordinance. The undeveloped portions of the site would be placed in an agricultural preserve and/or open space easement consistent with the Land Use Ordinance requirements (Section 22.22.150.B.8). Based on a population generation factor of 2.52 persons per unit, the 13 proposed residential lots would increase the local population by 33 persons (DOF 2017). The increase in the County's population resulting from the project would be consistent with allowable land uses in the Agriculture and Rural Lands categories on the site. Furthermore, since the undeveloped portions of the site would be placed in an agricultural preserve and/or open space easement consistent with the requirements of Section 22.22.150.B.8 of the County's Land Use Ordinance, the project would not result in population growth beyond what is expected under the current project. Therefore, population growth that may result from the project would not conflict with local growth management policy or result in exceedance of local and regional growth projections, and impacts would be less than significant. In addition, no existing homes or residents would be displaced as a result of project implementation. Therefore, no impacts related to the displacement of housing or people would occur.

4.15.2 Recreation

Would the project:

- Increase the use or demand for parks or other recreation opportunities?
- Affect the access to trails, parks, or other recreation opportunities?

There are no existing trails, parks, or other County maintained recreational facilities located in the project area. The proposed residential subdivision would create 13 new residential units in the County and future residents may utilize existing County parks and recreational facilities. In accordance with the Quimby Act, County ordinance requires the dedication of land or the imposition of fees on residential subdivisions as a means of providing park and recreation facilities to serve the subdivision's expanded population. Prior to final map recordation, the project applicant would be required to pay the required fees under the Quimby Act for the improvement or development of neighborhood or community parks. Therefore, project impacts to local and regional recreational facilities would be less than significant.

5 Other CEQA Required Discussions

This section discusses other issues for which CEQA requires analysis in addition to the specific issue areas discussed in Section 4.0, Environmental Impact Analysis. These additional issues include: (1) the potential to induce growth; (2) significant unavoidable effects of the project; (3) significant and irreversible impacts on the environment; and (4) the energy effects of the project, including use and conservation.

5.1 Growth Inducing Effects

Section 15126.2(d) of the *State CEQA Guidelines* requires that EIRs discuss the potential for projects to induce population or economic growth, either directly or indirectly. CEQA also requires a discussion of ways in which a project may remove obstacles to growth. Generally speaking, a project may be considered growth inducing if it results in one or more of the five conditions identified below:

1. Induces population growth;
2. Induces economic expansion;
3. Establishes a precedent setting action (e.g. an innovation, a radical change in zoning or general plan designation);
4. Results in development or encroachment in an isolated or adjacent area of open space (i.e. being distinct from “infill” development); or
5. Removes an impediment to growth (e.g. the establishment of an essential public service or the provision of new access to an area).

The impacts identified below are based on buildout of the project which includes a Vesting Tentative Tract Map (VTTM) and Conditional Use Permit (CUP) for an Agricultural Lands Cluster project to create 13 lots on a 299-acre parcel in unincorporated San Luis Obispo County. The project includes subdivision and development of 13 residential lots and associated infrastructure as well as agricultural and natural open space areas. The project’s open space and agriculture components include maintaining existing vineyards, planting additional vineyards, and preservation of most of the grassland and oak woodland on the southern portions of the property.

5.1.1 Population and Job Growth

The project proposes construction of 13 single family dwellings. Based on California Department of Finance 2017 estimates for average household size in the County, the project would accommodate approximately 33 new residents (i.e., 13 units x 2.52 persons/unit) (DOF 2017). This would constitute an approximately 0.01 percent increase relative to the current County population of 280,101 persons (DOF 2017). Thus, direct population growth resulting from the project would be minimal.

Because the project is a residential project, it is not expected to generate any new permanent jobs. Construction associated with build out of the project would directly generate temporary employment opportunities. These new construction jobs would not be expected to induce people to

relocate to the area to fill new job opportunities as construction jobs due to the project would be temporary. Thus, the indirect population growth associated with new jobs from project buildout is expected to be minimal.

The project would have a significant cumulative impact on regional growth if the project in combination with other planned development were to exceed regional growth projections. In its 2014 RTP/SCS, SLOCOG forecasts that the population of Hidden Hills will increase to 315,363 by 2035 (SLOCOG 2015). The total County population with the project would be approximately 280,134 persons. Other planned projects in the area would also provide additional dwelling units that would accommodate an increase in the County's population. However, cumulative development, including the project, would is not anticipated to exceed regional growth projections for the County. Therefore, the project would not have a significant cumulative impact on regional growth.

5.1.2 Precedent Setting Action

The project would require discretionary approvals from the County including the VTTM, CUP, and development plan for the 299-acre site. Since the project would be required to be consistent with the development parameters and what is envisioned for the area in the County's General Plan and Land Use Ordinance, it would not be considered precedent setting. Nevertheless, the project would be at the discretion of the County Planning Commission who may consider it on its own merits in terms of how the new proposal fulfills the County General Plan goals and objectives. Any growth inducement from these actions would occur within what is planned for the rural areas of the County in the County's General Plan.

5.1.3 Development of Open Space/Vacant Land

Development of open space is considered growth-inducing when it occurs outside urban boundaries or in isolated locations instead of infill areas. Although the project would result in development in the rural, unincorporated area of the County, it would be consistent with the provisions in Section 22.22.150 of the County Land Use Ordinance in 2001, when the project was accepted for processing, for a major Agricultural Cluster Project. In addition, the undeveloped portions of the site would be placed in an agricultural preserve and/or open space easement consistent with the Land Use Ordinance requirements (Section 22.22.150.B.8).

5.1.4 Removal of an Impediment to Growth

The project would not result in the removal of an impediment for growth, as adequate access and services are already available for the adjacent and surrounding areas. Rather, the project would facilitate a planned Agricultural Cluster Project, consistent with Section 22.22.150 of the County Land Use Ordinance. The undeveloped portions of the site would also be placed in an agricultural preserve and/or open space easement consistent with the Land Use Ordinance requirements (Section 22.22.150.B.8). As such, the project would inhibit uncontrolled piecemeal growth and urban sprawl in the area. No additional utility infrastructure or facilities beyond those necessary to accommodate the project would be required. Overall, the project would not result in the removal of an impediment to growth.

5.2 Significant Unavoidable Effects

State CEQA Guidelines §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.

5.3 Significant Irreversible Environmental Effects

State CEQA Guidelines §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 result in the permanent conversion of open, agricultural lands to residential use. It would also 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 *State 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 involve the use of energy during the construction and operational phases of the project. Energy use during the construction phase would be in the form of fuel consumption (e.g., gasoline and diesel fuel) to operate heavy equipment, light-duty vehicles, and machinery.

Temporary grid power may also be provided to any temporary construction trailers or electric construction equipment. Long-term operation of the project would require permanent grid connections for electricity and natural gas service to power internal and exterior building lighting, and heating and cooling systems.

Electricity service for the project would be provided by Pacific Gas & Electric (PG&E), which provides natural gas and electric service to approximately 16 million people throughout a 70,000-square mile service area in northern and central California (PG&E 2017).

According to SLOCOG and the California Department of Transportation (Caltrans), there were a total of approximately 8,311,400 daily VMT in the County in 2015 (Caltrans 2017). These annual VMT contribute to the consumption of gasoline and diesel fuel in the region. San Luis Obispo County also provides a variety of public transit services, including bus and paratransit service and vanpools.

California used 11,510,704 megawatt hours (MWh) of electricity in 2015 (U.S. Energy Information Administration 2017a) and 2,309,759 million cubic feet of natural gas in 2015 (U.S. Energy Information Administration 2017b). California used 14,720,518,477 gallons of motor vehicle fuel in 2014 (CEC 2015).

CalEEMod is a land use emissions computer model designed to provide a uniform platform for government agencies, land use planners, and environmental professionals in California to quantify potential criteria pollutant and greenhouse gas (GHG) emissions associated with both construction and operations from a variety of land use projects. The model quantifies direct emissions from construction and operation activities (including vehicle use), as well as indirect emissions, such as GHG emissions from energy use, solid waste disposal, vegetation planting and/or removal, and water use. The model also identifies mitigation measures to reduce criteria pollutant and GHG emissions along with calculating the benefits achieved from mitigation measures selected by the user. Complete CalEEMod results and assumptions can be viewed in Appendix C.

The project's estimated energy usage, calculated using CalEEMod and shown in the CalEEMod output files in Appendix C, is summarized and compared to statewide usage in Table 40. Estimated motor vehicle fuel use is further detailed in Table 41.

Table 40 Estimated Project-Related Energy Usage Compared to State-Wide Energy Usage

Form of Energy	Units	Annual Project-Related Energy Use	Annual State-Wide Energy Use	Project Percentage of State-Wide Energy Use
Electricity	MWh	113[1]	11,510,704[2]	0.001%
Natural Gas	million cubic feet	0.5[1]	2,309,759[3]	0.00002%
Motor Vehicle Fuels	gallons	28,709	14,720,518,477[4]	0.002%

[1] CalEEMod output (provided in Appendix C)

[2] U.S. Energy Information Administration 2017

[3] U.S. Energy Information Administration 2017

[4] CEC 2015

[5] See Table 5-2

Table 41 Estimated Project-Related Annual Motor Vehicle Fuel Consumption

Vehicle Type	Percent of Vehicle Trips[1]	Annual Vehicle Miles Traveled[2]	Average Fuel Economy (miles/gallon)[3]	Total Annual Fuel Consumption (gallons)
Passenger Cars	55.9	288,390	23.3	12,377
Light/Medium Trucks	35.9	185,210	17.1	10,831
Heavy Trucks/Other	7.7	39,725	7.3	5,442
Motorcycles	0.5	2,580	43.4	59
Total	100.0%	515,905	–	28,709

[1] Percent of vehicle trips found in Table 4.3, *Fleet Mix*, in CalEEMod output (Appendix C)

[2] Total Annual VMT found in Table 4.2, *Trip Summary Information*, in CalEEMod output (Appendix C)

[3] Source: U.S. Department of Transportation (DOT), Bureau of Transportation Statistics. 2013. National Transportation Statistics 2013, Tables 4-12 and 4-13. Washington DC. Vehicle classes provided in CalEEMod do not correspond exactly to vehicle classes in USDOT fuel consumption data, except for motorcycles. Therefore, it was assumed that passenger cars correspond to the light-duty, short-base vehicle class, light/medium trucks correspond to the light-duty long-base vehicle class, and heavy trucks/ other correspond to the single unit, 2-axle 6-tire or more class.

Note: Totals may not add up due to rounding.

The project would result in increased vehicle trips, and vehicle miles traveled (VMT) as compared to current conditions. However, as shown in Table 40 and Table 41, the project would make a minimal contribution to statewide energy consumption and would not adversely affect energy supplies or require the construction of new energy facilities.

The project would also 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 of San Luis Obispo Green Building Ordinance (Chapter 8 of Title 19 of the San Luis Obispo 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. The project is 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

As required by Section 15126.6 of the *CEQA Guidelines*, this EIR examines a range of reasonable alternatives to the project that would attain most of the basic project objectives (stated in Section 2.0, *Project Description*, of this EIR) but would avoid or lessen the significant adverse impacts.

The project is within the County-designated San Luis Obispo Sub Area North. As discussed in Section 2.0, *Project Description,* and stated in the San Luis Obispo County General Plan Land Use and Circulation Element (Part II), The Area Plans, Chapter IV. San Luis Obispo Area Plan, Section 1.6, the vision for the San Luis Obispo Sub Area North is as follows:

> "The sub-area should maintain a rural character in harmony with agriculture, business, recreational, environmental, and residential opportunities."

Specific goals, which are related to development on agricultural and rural lands, are summarized as follows:

Environment

- Protect and, where it has been degraded, enhance wildlife habitat areas.
- Protect the scenic values of natural landforms.
- Protect natural drainage channels and floodways in their natural condition to the maximum extent feasible.

Distribution of Land Uses

- Devote the remainder of the planning area to a "greenbelt" consisting of production agriculture and low-density development (Also see Framework for Planning).

Economy

- Encourage economic development balanced with the natural resources that enhance the natural beauty and character, and supports the social and environmental health of the planning area.

In addition, to achieve the San Luis Obispo Greenbelt, one of the specific objectives of County in considering the project is to use the Agricultural Lands Cluster provision to secure 95 percent of the project site in permanent agricultural uses and natural open space, while protecting the scenic views in the project vicinity, specifically from SR 227.

Included in this analysis are three alternatives, including the CEQA-required "No Project" Alternative, which involve changes to the project that may reduce the project-related environmental impacts identified in this EIR. Alternatives have been developed to provide a reasonable range of options to consider to assist decision-makers and the public in understanding the general implications of revising or eliminating certain components of the proposed project.

The following alternatives are evaluated in this EIR:

- **Alternative 1:** No Project
- **Alternative 2:** Conventional Subdivision
- **Alternative 3:** Reduced Project

Table 42 provides a summary comparison of the development characteristics of the proposed project and each of the alternatives considered. Detailed descriptions of the alternatives as well as analysis of the potential environmental impacts of each alternative are included in Sections 6.1 through 6.4.

Table 42 Comparison of Project Alternatives' Buildout Characteristics

Feature	Proposed Project	Alternative 1: No Project	Alternative 2: Conventional Subdivision	Alternative 3: Reduced Project
Lot Area (acres)	299	299	299	299
Approximate Development Area (acres)	15[a]	N/A	34	10
Height (feet)	24	N/A	35[b]	35[b]
Number of residential units	13	N/A	16 primary and 10 farm support quarters	9
Residential lot size	1 acre	N/A	20 acres for lots in RL category and 40 acres for lots in AG category	1 acre
Number of parcels	14; 13 residential, 1 ag/open space	1	8	10; 9 residential, 1 ag/open space
Effects on vineyards	Expanded by approximately 18 acres	N/A	Approximately 10 acres removed	Expanded by approximately 18 acres
Acres in WA or Open Space easement	285	145	0	289
Layout	Agricultural Cluster	Conventional Agriculture	Conventional Agriculture	Agricultural Cluster
Number of lots within County-designated SRA	2	N/A	3	0

a. 95% of lot acreage, consistent with requirements of the Agricultural Lands Cluster provision in Section 22.22.152.C.2 (Title 22 County Land Use Ordinance)

b. Maximum height for Agriculture and Rural Lands categories is equal to 35 feet, pursuant to Section 22.10.090.C.1 (Title 22 County Land Use Ordinance)

6.1 Alternative 1: No Project Alternative

6.1.1 Description

The No Project Alternative assumes that the project site is not subdivided and associated residential development does not occur. Current uses on the project site, consisting of irrigated vineyards and vacant rural land, would remain under this alternative. The land would remain in private ownership, and there would be no easements or restrictions over the property.

6.1.2 Impact Analysis

The No Project Alternative would avoid or delay the potentially significant, but mitigable impacts to biological resources identified for the project because the project site would remain in its current state. In addition, because this alternative would not result in any of the potentially significant impacts identified for the project, it would not trigger the need for any of the mitigation measures identified in this EIR. Although this alternative would retain the existing open space and agricultural land on the site, it would fail to meet the project objective to officially dedicate 95 percent of the project site as agriculture and natural open space. Overall, Alternative 1 would result in reduced physical environmental impacts when compared to the project, but would not achieve the County's goals for the San Luis Obispo Sub Area North, in which the project is located.

6.2 Alternative 2: Conventional Subdivision

6.2.1 Description

The Conventional Subdivision Alternative assumes that the project site is developed under the existing County land use categories on the site, without use of the Agricultural Cluster provisions. Approximately 225 acres of the project site are within the Agriculture land use category, with 8.5 acres of prime agricultural land. The remaining 74 acres on the southern portion of the site are within the County's Rural Lands land use category. The entire project site is within the Airport Review (AR) combining designation, and the southern portion of the property is also within the Sensitive Resource Area (SRA) combining designation (See San Luis Obispo County February 2014 The Area Plans:pages IV.7-23 and IV.7-27).

According to Section 22.04.040 of Title 22, Land Use Ordinance, of the County Code, where a site is divided by one or more land use category boundaries, the site shall be developed in compliance with the requirements of each district, as applicable. Based on the land use categories identified on the project site, under this alternative the site would be developed in compliance with Section 22.22.040, *Agriculture Category*, and Section 22.22.050, *Rural Lands Category*, of the County Code. Accordingly, under the Conventional Subdivision Alternative, the project site can be divided into approximately 8 lots and developed pursuant to Section 22.30.480 of Title 22 of the County Code, based on the NRCS soil classifications in the Agricultural portion of the property and 20 acre minimum lot size in the Rural Lands portion of the property.

6.2.2 Impact Analysis

The Conventional Subdivision Alternative would result in development distributed throughout the project site, pursuant to the County Code which requires a minimum 20-acre lot size for the Rural Lands land use category and 40-acre lot size for Agriculture land use category. Although this

alternative would presumably result in the majority of the site developed with agricultural uses surrounding isolated residential development footprints, potential residential development would result in conversion of some areas of prime agricultural lands to non-agricultural use, resulting in a significant impact to agricultural resources on the site. Additionally, this alternative would not achieve the project objection of dedicating 95 percent of the site in agricultural and natural open space uses to achieve the envisioned San Luis Obispo Greenbelt.

Rather than clustering development on one portion of the site similar to the project, this alternative would result in a more scattered approach to development. This may result in fencing off of properties and development of individual private drives to access each property. This would result in potentially significant impacts to sensitive plant and animal species, movement patterns for some species, and sensitive natural communities on the project site in the proposed development areas, similar to the project.

6.3 Alternative 3: Reduced Project

6.3.1 Description

The Reduced Project Alternative assumes a reconfiguration of the project to eliminate lots 10 through 13, which would reduce the overall level of impacts to biological resources identified for the project.

The Reduced Project Alternative would result in the creation of nine one-acre residential lots to the east of the drainage that intersects the southeastern portion the property. This would avoid any development on the west side of, in, or adjacent to the drainage. This alternative would include vineyard expansions and development of LID features in the same locations as proposed under the project. This alternative would maintain the buffer distances shown on the current site plan for the project (refer to Figure 5), in compliance with the County's Agricultural Buffer Policy requirement to provide a minimum 200-foot agricultural buffer. As with the project, the buffers included in this alternative would be located in the preserved agricultural areas onsite, between the proposed residential development lots and the existing and proposed vineyards on the property.

6.3.2 Impact Analysis

Per NRCS soils classification, the Cropley clay and Diablo clay soils on the project site are classified as Prime Farmland. Under the project, all of lot 4 and a portion of lots 3, 5, 6, 8, 9, and 11 as well as internal roadways (approximately 3.2 acres total) would be developed on Diablo clay soils. In addition, approximately 7.6 acres of the area proposed for residential and roadway development under the project are in areas classified as Prime Farmland and Farmland of Statewide Importance, per the County's soil classification. Under Alternative 3, the elimination of lots 10 through 13 as well as elimination of the roadway that would be necessary to access these lots would reduce the area of NRCS-classified Prime Farmland and County-classified Prime Farmland and Farmland of Statewide Importance converted to residential and roadway uses by approximately 0.5 acre when compared to the project. Although to a lesser extent than the project, this alternative would result in conversion of Prime Farmland, Unique Farmland, or Farmland of Statewide Importance to non-agricultural use. However, similar to the project this alternative would avoid development in areas of existing agricultural production, would expand the productivity of on-site prime agricultural land by expanding the on-site vineyards, and would preserve 95 percent of the gross site area in

agriculture and/or natural open space in perpetuity, consistent with Section 22.22.152 of the County's Land Use Ordinance.

This alternative would result in a smaller development area than the project and would not include construction of the drainage crossing structure within the southeastern drainage as is proposed for the project. As such, this alternative would eliminate impacts to the southeastern drainage and would reduce potential downstream effects resulting from sediments, fuels, oils, solvents, pesticides, fertilizers, and herbicides. The reduced level of development under this alternative would also reduce potential impacts to special status plant and animal species and potential short-term impacts to onsite drainages and the species residing in or utilizing these areas. However, similar to the project, the Reduced Project Alternative may still result in long-term impacts to wildlife movement and special status species could occur due to the increased human presence onsite, lighting on homes and along roadways, noise from traffic and human activity, activity and noise of domestic pets, and other human activities. Overall, this alternative would result in significant, but mitigable impacts to biological resources, but to a lesser extent than the project.

6.4 Alternatives Considered But Rejected

Other alternatives considered include various scenarios that would reduce the number of residential lots and, thus, development area on the project site. However, these scenarios would not result in a reduction or avoidance of adverse environmental effects of the project or would be generally within the scope of the alternatives discussed above. Therefore, other scenarios were rejected from further consideration.

6.5 Environmentally Superior Alternative

This section evaluates the impact conclusions for the major issue areas for the project and the three alternatives under consideration. It then identifies the environmentally superior alternative for each issue area. In accordance with the *State 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 No Project Alternative (Alternative 1) would have the fewest environmental impacts, and would represent the environmentally superior alternative to the project as proposed. However, because this is the "No Project" Alternative, CEQA requires that a separate alternative also be identified as the Environmentally Superior Alternative. Additionally, the No Project alternative would not fulfill the intended planning goals for development in the unincorporated areas of the County.

Also from a review of the results of the analysis in this section, the next most environmentally superior alternative would be the Reduced Project Alternative (Alternative 3). This alternative would achieve the clustered agricultural-focused development intended for the property, but would reduce the conversion of agricultural land to non-agricultural uses and the biological impacts associated with the proposed crossing of the southeastern drainage for access to proposed lots beyond the drainage. There would still be some similar impacts from this alternative, since the development would have to include the private drive at Greystone Place in order to provide access to the parcels. In addition, the drainage improvements, LID features, utilities, and other improvements necessary for the development would also be constructed under this alternative.

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7 References and EIR Preparers

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