2019 RTP

Regional Transportation Plan

CONNECTING COMMUNITIES

Draft Environmental Impact Report

SCH# 2018011015

Public Draft

March 5th, 2019

1 Draft Environmental Impact Report

Contents

Table of Figures

S.0 EXECUTIVE SUMMARY

This summary is provided as an overview of the proposed action (proposed project) and its consequence pursuant to CEQA Guidelines Section 15123. Included in this chapter is a brief summary of the project, project alternatives, potential areas of controversy, significant effects and proposed mitigation strategies. For additional detail regarding specific issues, please consult the appropriate Sections of **Chapter 3.0, Environmental Analysis**.

S.1 EIR Purpose and Scope

A Program Environmental Impact Report (PEIR) is being developed for the 2019 Regional Transportation Plan and Sustainable Communities Strategy (2019 RTP), as required by the California Environmental Quality Act (CEQA). Program EIRs are typically used for plans and programs, such as general plans, redevelopment plans, and such as in this case, regional transportation plans. This type of EIR allows the jurisdiction to evaluate broad-scale impacts at a general, or "programmatic," level. This “high-altitude” approach is conducive to evaluating region-wide issues.

The program EIR approach has three major benefits: First, the program EIR provides a comprehensive analysis related to, both, the spatial and temporal dimensions of a project. In addition to covering individual impact areas at a general level, this approach provides coverage of “big-picture” issues, such as cumulative and growth inducing impacts, as well as analysis of program alternatives. A major benefit is the ability to identify major issues and alternatives early on, before making significant investments in project engineering and design. Secondly, this approach affords the potential for streamlining during the subsequent review of individual “site-specific” projects, essentially tiering off the program EIR. In other words, the program EIR can be relied upon at the project stage for those region-wide issues, thereby avoiding redundant analyses. Finally, the program EIR provides an opportunity for public involvement at an early stage, including the ability to shape overall program goals and policies.

In addition to the impact areas required to be addressed under CEQA, the 2019 RTP Program EIR also addresses social and environmental justice issues. Environmental Justice requirements are governed by Executive Order 12898 and Title VI of the Civil Rights Act, which address discrimination. These issues are required to be addressed under any programs or activities receiving Federal financial assistance. This EIR will also reflect the most recent update to the State CEQA Guidelines, adopted by the Resources Secretary in November 2018 and approved by the Office of Administrative Law in January 2019. The updated Guidelines will affect how impacts are assessed in the EIR. The changes are posted on the Resources Agency's website at http://resources.ca.gov/ceqa/.

The last Program EIR was developed for the 2010 RTP/PSCS. An EIR Addendum was subsequently published in 2015 for the 2014 RTP/SCS. SLOCOG Staff initiated the current Program EIR process with release of the Notice of Preparation on January 9, 2018, followed by a Public Scoping Meeting held January 22, 2018.

This programmatic (EIR) provides the environmental information, an environmental analysis and California Environmental Quality Act (CEQA) documentation necessary to adequately consider the effects of the implementation of the 2019 San Luis Obispo Council of Governments Regional Transportation Plan and Sustainable Communities Strategy (2019 RTP or “Project”). The EIR

incorporates and builds upon information provided in previous RTP EIRs, reflecting changes that have since occurred. These changes include:

- Implementation of GHG reduction targets established by the Air Resources Board (ARB);
- Revisions to goal, policy, and strategy statements;
- Deletion of some projects which appeared on previous Action Element lists, but which have since attained partial or full funding, are under construction, or have been completed since adoption of the 2010 RTP/pSCS EIR and 2014 Addendum, or otherwise dropped from consideration.
- Revisions to the environmental analysis to conform with the January 2019 amendments to the CEQA Guidelines. The major changes address the following topics:
    - Thresholds of Significance
    - Transportation and Land Use – Focus on VMT v. LOS
    - New Category of Tribal Cultural Resources
    - Greenhouse Gas/Climate Change
    - Wildfire Impacts
    - Water Supply

S.2 Project Summary

The project is the RTP 2019 Regional Transportation Plan and Sustainable Communities Strategy ("2019 RTP" or "RTP"). The RTP is a federally mandated (Title 23 U.S.C. Section 134) comprehensive long-range (20+ year) regional transportation plan. The Plan is used to guide development of the Regional and Federal Transportation Improvement Program as well as other transportation planning and programming efforts. The Sustainable Communities Strategy (SCS) is a major driver of this planning effort, intended to address the issue of climate change, consistent with the California Global Warming Solutions Act of 2006 (AB32) and SB 375 (2008).

The RTP identifies the region's transportation needs, sets forth an action plan of projects, determines actions and programs to address the needs and issues, and documents the financial resources needed to implement the Plan. The RTP is intended to provide a clear vision of San Luis Obispo County's regional transportation goals, policy objectives, and strategies. The Action Element of the RTP includes major transportation projects being considered by various partner agencies. Such projects include intersection improvements, highway and roadway widening, bicycle lanes and paths, pedestrian-related projects, rail and transit-oriented projects, and other related infrastructure.

The RTP is a long-range planning/programming document and does not include specific project designs or construction schedules. Therefore, its adoption does not represent an approval action for any of the

individual transportation programs and projects listed in the Action Element. Specific project development proposals would be subject to future environmental review.

The Sustainable Communities Strategy (SCS) is the land use section of the document, consistent with the purpose and intent of state bills related to greenhouse gas emissions (GHGs) and climate change, including the California Global Warming Solutions Act of 2006 (AB32) and SB 375 (2008). At the time the 2010 RTP EIR was prepared, there was no specific requirement for an SCS. SLOCOG prepared a preliminary strategy, nevertheless, in order to implement the purpose and intent of AB 32 and prepare for the integration of SB 375 provisions at an early date. The 2014 RTP/SCS included the first required SCS. The 2019 RTP completes the second cycle for the region's SCS.

The San Luis Obispo Council of Governments (SLOCOG) is developing the 2019 RTP and is the CEQA Lead Agency responsible for preparation of this EIR. The 2019 RTP has been prepared to meet requirements set forth in the 2017 California Regional Transportation Guidelines, the Clean Air Act Amendments of 1990, metropolitan transportation planning regulations, and other applicable State and federal regulations. SLOCOG, as Lead Agency, has approval authority and responsibility for considering the environmental effects of the whole of the project.

S.3 Alternatives

Various scenarios were studied in the 2019 RTP, of which one, Alternative 3, was selected as the Environmentally Superior Project (conditionally). This alternative would reduce, and possibly avoid the potentially significant impacts associated with the proposed project. However, this alternative is inferior to the Proposed Project (RTP Scenario 3), which would result in several environmental benefits overall, most importantly reducing per-capita GHG emissions. Moreover, the proposed project would also meet the project's policy objective of achieving the SCS targets for the region, which were established by the California Air Resources Board (CARB).

The proposed project evaluated in **Chapter 3.0, Environmental Analysis** of this EIR includes all projects from the constrained and unconstrained project lists. The latter, unconstrained list, is included as a worst-case scenario for purposes of CEQA analysis, in the unlikely event all projects from the combined lists becomes available. **Chapter 4.0, Alternatives,** of this EIR examines three (3) alternatives to the 2019 RTP:

- Alternative 1 – "NO PROJECT ALTERNATIVE" – Projects in the "Pipeline"
- Alternative 2 "MAX COMPACT HOUSING ALTERNATIVE" (RTP Scenario 4 - Future Year 2035 20/80) – distributing 20% to Large Lot/80% to Compact Housing and using a jobs-housing balance emphasis. The feasibility of this alternative is potentially limited because of potential policy conflicts. The alternative may also indirectly increase VMT, rather than lower it.
  Issue: Limited feasibility, Potentially increases VMT
- Alternative 3 "ROAD LESS TRAVELED ALTERNATIVE" (RTP Scenario 3 – Future Year 2035 and 2045 30/70) - distributing 30% to Large Lot/70% to Compact Housing and using a jobs-housing balance emphasis. Meets project objectives and reduction targets. Same as Proposed Project (Scenario 3), but Eliminates Roadway Improvement Projects.
  Issue: Fails to meet key project objectives

S.4 Areas of Concern

Pursuant to State CEQA Guidelines Section 15123, this EIR acknowledges the areas of controversy and issues to be resolved which are known to SLOCOG or were raised during the scoping process.

Primary environmental areas of concern raised by the commenting agencies and the public include:

- Air quality permits, emissions analysis, and sensitive receptors;
- Cultural resources, especially of Native American origin, mitigation and monitoring

S.5 Environmental Impacts

State CEQA Guidelines §15123(b)(1) provides that the summary shall identify each significant effect with proposed mitigation measures that would reduce or avoid that effect. This information is summarized below in **Figure S-1**. The significance of each impact is also shown, both before and after implementation of mitigation 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 State CEQA Guidelines §15093.
>
> **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 State CEQA Guidelines §15091.
>
> **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.

Section 15126(b) of the State CEQA Guidelines requires an EIR to "describe any significant impacts, including those which can be mitigated but not reduced to a level of insignificance. Where there are impacts that cannot be alleviated without imposing an alternative design, their implications and the reasons why the project is being proposed, notwithstanding their effect, should be described."

Levels of significance are determined by comparing the impact to thresholds of significance as described under each environmental issue area in **Chapter 3.0, Environmental Analysis** of this document.

In general, "Significance Thresholds" are provided in CEQA and the CEQA Guidelines. Additionally, specific agency thresholds are particularly relevant to regional transportation plan EIRs, such as for those from Caltrans and California Air Resources Board.

As previously mentioned, SLOCOG has not adopted local thresholds and, instead, is relying upon the general thresholds provided in the State CEQA Guidelines. Refer to **Section 6.0** of this EIR for a discussion of additional effects found not to be significant (no impact).

Figure S-1: Executive Summary of Project Impacts Table

Impacts of the Proposed Plan	Mitigation Measures	Significance After Mitigation
3.1 Aesthetics/Visual Resources		
Impact AES-1: Implementation of some of the RTP roadway projects would likely significantly impact public views along designated scenic corridors or highways considered to have high scenic qualities. This is considered a Class II, *significant but mitigable,* impact.	**MM AES-1(a)** The lead agency shall ensure that recontouring provides a smooth and gradual transition between modified landforms and existing grade where a particular improvement affects adjacent landforms. **MM AES-1(b)** The lead agency shall ensure that associated landscape materials enhance landform variation, provide erosion control, and blend with the natural setting. This requirement can be accomplished through the placement of conditions on the project by the lead agency during individual environmental review. To ensure compliance with approved landscape plans, the implementing agency shall provide a monetary performance security equal to the value of the landscaping/irrigation installation. **MM AES 1(c)** The lead agency shall ensure that a project in a scenic view corridor will have the minimum possible impact, consistent with project goals, upon foliage, existing landscape architecture, and natural scenic views. This requirement shall be accomplished through the placement of conditions on the project by the lead agency during the project-specific environmental review. The lead agency shall ensure that specific design considerations to achieve this mitigation are enacted at each stage of design. **MM AES 1(d)** The lead agency shall ensure that potential noise impacts arising from increased traffic volumes associated with adjacent land development shall be preferentially mitigated through the use of setbacks and the acoustical design of adjacent structures. The use of sound walls, or any other architectural features that could block views from the scenic highways or other view corridors, shall be discouraged. Where use of sound walls is found to be necessary, walls shall incorporate offsets, accents, and	*Less than significant*

Impacts of the Proposed Plan	Mitigation Measures	Significance After Mitigation
	landscaping to prevent visual monotony, as described in *mitigation measure N-2.*	
Impact AES-2: Implementation of RTP roadway projects could transform the county's semi-rural/rural areas to a more suburban/urban condition, through the addition of lighting and other urban features. This is considered Class I, *significant and unavoidable,* impact.	**MM AES-2(a)** Roadway extensions and widenings shall avoid the removal of existing mature trees and other mature vegetation to the extent feasible. Landscaping designs for the roadway shall be consistent with those of the specific RTP project lead agency. **MM AES-2(b)** Lighting shall be designed so as not to spill over onto adjacent properties and shall demonstrate a nonintrusive quality through incorporation of baffles and lens cut-offs to direct lighting downward, while still providing light for safety and/or security. **MM AES-2(c)** All facilities and landscaping in rural areas shall incorporate features complementary of the natural surroundings, including, but not limited to, earth-tone colors, controlled lighting, and natural materials.	*Significant and unavoidable*
3.2 Air Quality and Health Impacts / Risks		
Impact AQ-1: Many of the capital improvement projects included in the RTP would involve construction activity that could generate temporary increases in local air pollution. Construction impacts can be significant, depending upon the project and site-specific conditions, both of which are unknown at this time. Because of their temporary nature, mitigation is can be	**MM AQ-1(a)** The lead agency for a particular RTP project that involves construction shall incorporate APCD's standard "Standard Mitigation Measures for Construction Equipment," as follows: The standard construction equipment mitigation measures for reducing nitrogen oxide (NOx), reactive organic gases (ROG), and diesel particulate matter (DPM) emissions are listed below and in section 2.3.1 of the APCD's 2012 CEQA Handbook. These measures are applicable to all projects where construction phase emissions exceed APCD thresholds: • Maintain all construction equipment in proper tune according to manufacturer's specifications;	*Less than significant*

Impacts of the Proposed Plan	Mitigation Measures	Significance After Mitigation
achieved via standard measures. This impact is considered Class II, *significant but mitigable*.	• Fuel all off-road and portable diesel powered equipment with CARB certified motor vehicle diesel fuel (non-taxed version suitable for use off-road); • Use diesel construction equipment meeting CARB's Tier 2 certified engines or cleaner off-road heavy-duty diesel engines, and comply with the State Off-Road Regulation; • Use on-road heavy-duty trucks that meet the CARB's 2007 or cleaner certification standard for on-road heavy-duty diesel engines, and comply with the State On-Road Regulation; • Construction or trucking companies with fleets that that do not have engines in their fleet that meet the engine standards identified in the above two measures (e.g. captive or NOx exempt area fleets) may be eligible by proving alternative compliance; • All on and off-road diesel equipment shall not idle for more than 5-minutes. Signs shall be posted in the designated queuing areas and or job sites to remind drivers and operators of the 5-minute idling limit; • Diesel idling within 1,000 feet of sensitive receptors is not permitted; • Staging and queuing areas shall not be located within 1,000 feet of sensitive receptors; • Electrify equipment when feasible; • Substitute gasoline-powered in place of diesel-powered equipment, where feasible; and, • Use alternatively fueled construction equipment on-site where feasible, such as compressed natural gas (CNG), liquefied natural gas (LNG), propane or biodiesel.	

Impacts of the Proposed Plan	Mitigation Measures	Significance After Mitigation
	If the estimated construction phase ozone precursor emissions from the actual fleet for a given Phase are expected to exceed the APCD's threshold of significances after the standard mitigation measures are factored into the estimation, then Best Available Control Technology (BACT) for Construction Equipment needs to be implemented to further reduce these impacts. The BACT measures can include: • Further reducing emissions by expanding use of Tier 3 and Tier 4 off-road and 2010 on-road compliant engines; • Repowering equipment with the cleanest engines available; and • Installing California Verified Diesel Emission Control Strategies. These strategies are listed at: arb.ca.gov/diesel/verdev/vt/cvt.htm	
Impact AQ-2: Implementation of the RTP would reduce emissions of ozone precursors as compared to what would occur if no transportation projects were implemented by promoting a multimodal transportation system and thereby reducing reliance on single-occupancy vehicle use. The RTP would also implement the CAP Transportation Control Measures. This is considered a Class III, *less than significant*, impact.	None required	*Less than significant*

Impacts of the Proposed Plan	Mitigation Measures	Significance After Mitigation
Impact AQ-3: The RTP is substantially consistent with the SLO Air Pollution Control District 2001 Clean Air Plan (CAP). Class III, *less than significant*, impacts related to RTP consistency with the CAP would result.	None required	*Less than significant*
Impact AQ 4: Implementation of RTP roadway improvement, transit, and TSM/TDM projects would not result in localized traffic congestion that causes localized carbon monoxide (CO) emission hot spots. This would be considered a Class III, *less than significant*, impact.	None required	*Less than significant*
Impact AQ-5: Implementation of RTP transit service projects could result in stationary or semi-stationary emissions sources that expose sensitive receptors to substantial pollutant concentrations, such as diesel exhaust. This would be considered a Class II, *significant but mitigable*, impact.	**MM AQ-5** The agencies that propose a transit improvement projects should, first and foremost, consider sensitive receptors in the siting and design of transit facilities. Given that, the most effective mitigation is at the source, during the specification and design of transit vehicles. Agencies should implement measures, where feasible, to minimize noise impacts on sensitive receptors through initially focusing upon operating restrictions and technical measures, such as damped wheels for buses. Along the transit pathway or route, sound barriers should be considered. And, at the receiver end, sound walls and building noise insulation should be considered. The Federal Transit Administration has published a report assessing noise impacts associated	Less than significant

Impacts of the Proposed Plan	Mitigation Measures	Significance After Mitigation
	with transit. The 2018 FTA Report also includes costs related to various types of mitigation, which is helpful in determining feasibility of these measures.	
3.3 Biological Resources		
Impact B-1: Construction activity associated with implementation of certain RTP roadway projects may temporarily disturb wetland or riparian habitats and/or other biological resources. This is considered a Class II, *significant but mitigable*, impact.	**MM B-1(a)** In the event that wetlands/riparian habitats/other jurisdictional habitat loss is unavoidable, the lead agency shall ensure the following: a) As a first course of action, mitigation should be in-kind and on-site with no net destruction of habitat value. Additional mitigation beyond compliance with the requirements of existing regulations pertaining to biological resources would be required at a ratio that meets applicable regulatory agency requirements; or b) Where in-kind and on-site mitigation is not feasible, implementing agencies shall develop a mitigation plan or habitat conservation plan (HCP), in consultation with regulatory agencies to mitigate impacts to riparian areas or wetlands. Mitigation shall be at a minimum 2:1 ratio. In the event a regional HCP or multi-species conservation plan is developed at some point in the future, implementing agencies could participate in such a mitigation scheme as another option. **MM B-1(b)** The lead agency for an RTP project impacting oak trees shall ensure that construction around oak trees or areas of impact require a tree protection and replacement plan. The plan may include, but would not be limited to, setbacks from trees and protective fencing, restrictions regarding grading and paving near trees, direction regarding pruning and digging within root zone of trees, and requirements for replacement and maintenance of trees.	*Less than significant*

Impacts of the Proposed Plan	Mitigation Measures	Significance After Mitigation
Impact B-2: Implementation of certain RTP projects could permanently alter natural habitat areas, affect sensitive species, and/or create barriers to wildlife corridors. Impacts of many individual projects can likely be mitigated to a less than significant level. However, because the feasibility of mitigation cannot be determined at this time, this impact is considered Class I, *significant and unavoidable*.	**MM B-2**: The lead agency for an RTP project with potentially significant long-term effects to biological resources shall ensure that project specific environmental reviews implement specific mitigation measures and/or alternative alignments that avoid or minimize impacts to natural habitat areas, affected sensitive species, and/or wildlife corridors.	*Significant and unavoidable*
Impact B 3: Implementation of certain RTP projects would occur in areas subject to the requirements of habitat conservation plans (HCP). Potential RTP project impacts on species and habitat protected under an HCP would be considered a Class II, *significant but mitigable*, impact.	**MM B-3** The lead agency of a particular RTP project with potentially significant conflicts with an HCP shall ensure that the project complies with applicable mitigation and fees, as outlined in the HCP, and further, that the project specific environmental review considers specific mitigation measures and/or alternative alignments that avoid or minimize conflicts with applicable HCPs and the protected species and habitats thereof.	*Less than significant*
3.4 Greenhouse Gas Emissions / Climate Change		

Impacts of the Proposed Plan	Mitigation Measures	Significance After Mitigation
Impact GHG-1: Implementation of the capital improvement projects included in the 2019 RTP would not result in a net increase in greenhouse gas emissions that would conflict with the goals of AB 32 or result in a significant impact on the environment. This is considered a Class III, *less than significant*, impact.	None required	*Less than significant*
3.5 Cultural and Tribal Cultural Resources		
Impact CR-1: Development under the RTP could disturb known and previously undiscovered cultural resources. Such impacts would be Class II, *significant but mitigable*.	**MM CR-1(a)** The lead agency of a particular RTP project involving substantial earth disturbance, the removal or disturbance of existing buildings, or construction of permanent above-ground structures or roadways shall ensure that the following elements are included in individual environmental review: a) A map defining the Area of Potential Effects (APE) shall be prepared for RTP improvements that involve substantial earth disturbance, the removal or disturbance of existing buildings, or construction of permanent above-ground structures or roadways. This map will indicate the areas of primary and secondary disturbance associated with construction and operation of the facility and will help in determining whether known cultural resources are located within the impact zone. b) A preliminary study of each project area, as defined in the APE, shall be completed to determine whether or not the project area has been	*Less than significant*

Impacts of the Proposed Plan	Mitigation Measures	Significance After Mitigation
	studied under an earlier investigation and to determine the impacts of the previous project. c) If the results of the preliminary studies indicate additional studies are necessary, development of field studies and/or other documentary research shall be developed and completed (Phase I studies). Negative results would result in no additional studies for the project area. d) Based on positive results of the Phase I studies, an evaluation of identified resources shall be completed to determine the potential eligibility/ significance of the resources (Phase Il studies). e) Based on positive results of the Phase II studies, Phase III mitigation studies shall be coordinated with the Office of Historic Preservation, as the research design will require review and approval from the OHP. In the case of prehistoric or Native American related resources, the Native American Heritage Commission and/or local representatives of the Native American population shall be contacted and permitted to respond to the testing/mitigation programs. **MM CR-1(b)** If development of a RTP project requires the presence of an archaeological monitor, lead agency shall ensure that a certified archaeologist/paleontologist monitors the grading and/or other ground-altering activities. The schedule and extent of the monitoring will depend on the grading schedule and/or extent of the ground alterations. **MM CR-1(c)** If cultural resources are encountered during development, work should be halted to avoid the materials and their context until a qualified consulting archaeologist and Native American representative (if appropriate) have evaluated the situation, and recorded identified cultural resources and determined suitable mitigation measures.	

Impacts of the Proposed Plan	Mitigation Measures	Significance After Mitigation
	MM CR-1(d) The lead agency shall ensure at the project-specific stage that mitigation for potential impacts to significant cultural resources consider, for example, the following measures: a) Realignment of the project right-of-way (avoidance; the most preferable method); b) Capping of the site and leaving it undisturbed; c) Addressing structural remains with respect to NRHP guidelines (Phase III studies); d) Relocating structures per NRHP guidelines; e) Creation of interpretative facilities; and/or f) Development of measures to prevent vandalism. **MM CR-1(e)** The lead agency, in consultation with a Native American representative, and a qualified archaeologist, shall develop a monitoring plan for earthmoving activities within native soil. **MM CR-1(f):** Mitigation may include any, or a combination of the following measures, or other measures upon which the parties reach agreement. • Preservation in place • Protecting the cultural character and integrity of the resource • Protecting the traditional use of the resource • Protecting the confidentiality of the resource • Permanent conservation easements with culturally appropriate management criteria	
3.6 Energy		
Impact E-1: Many of the capital improvement projects included in	None required	*Less than significant*

Impacts of the Proposed Plan	Mitigation Measures	Significance After Mitigation
the RTP would result in a decrease in energy consumption associated with vehicle fuel. This is considered a Class III, *less than significant*, impact.		
3.7 Geology		
Impact G-1: Implementation of certain RTP projects may be located on potentially unstable soils, in areas of high liquefaction or erosion potential, or in areas subject to landslides. This is considered a Class II, *significant but mitigable*, impact.	**MM G-1(a)** Where an RTP project is located in an area of moderate to high liquefaction potential, as determined by a certified geotechnical engineer , the lead agency shall ensure that structures are designed based upon geology, soils, and earthquake engineering studies. Possible design measures include deep foundations, pile driving, removal of liquefiable materials, and dewatering. **MM G-1(b)** The lead agency of a particular RTP project involving cut slopes over 20-feet in height or located in areas of bedded or jointed bedrock as determined by a certified geotechnical engineer shall ensure that specific slope stabilization studies are conducted. Possible stabilization methods include buttresses, retaining walls, and soldier piles. **MM G-1(c)** The lead agency of an RTP project located in an area of highly expansive, collapsible, or compressible soils shall ensure that a specific investigation and appropriate design factors are implemented. **MM G-1(d)** The lead agency of an RTP project involving deep foundations or underground areas located in an area of high groundwater potential shall ensure that appropriate construction techniques, such as dewatering, special waterproofing, and deeper foundations, are included.	*Less than significant*

Impacts of the Proposed Plan	Mitigation Measures	Significance After Mitigation
	MM G-1(e) The lead agency of an RTP project involving deep foundations or underground areas located in an area of moderate or high erosion potential shall ensure that a grading and erosion control plan that minimizes erosion and sedimentation be prepared and implemented by the project proponent, prior to issuance of grading permits. The grading and erosion control plan shall include the following: a) Methods such as retention basins, drainage diversion structures, spot grading, silt fencing/coordinated sediment trapping, straw bales, and sandbags shall be used to minimize erosion on slopes and siltation into waterways during grading and construction activities. b) Graded areas shall be revegetated within four weeks of grading activities with deep-rooted, native, drought-tolerant species to minimize slope failure and erosion potential. Geotextile binding fabrics shall be used if necessary to hold slope soils until vegetation is established. c) Exposed areas shall be stabilized to prevent wind and water erosion, using methods approved by the SLOAPCD. d) Landscaped areas adjacent to structures shall be graded so that drainage is away from structures. e) Grading on slopes steeper than 5:1 shall be designed to minimize surface water runoff. f) Fills placed on slopes steeper than 5:1 shall be properly benched prior to placement of fill. g) Brow ditches and/or berms shall be constructed and maintained above all cut and fill slopes. h) Cut and fill benches shall be constructed at regular intervals.	

Impacts of the Proposed Plan	Mitigation Measures	Significance After Mitigation
	i) Excavation and grading shall be limited to the dry season of the year (typically April 15 to November 1, allowing for variations in weather) unless an approved erosion control plan is in place and all measures therein are in effect.	
Impact G-2: Implementation of certain RTP projects could be subject to seismic hazards, including fault rupture and ground shaking. This is considered a Class II, *significant but mitigable*, impact.	**MM G-2(a)** The lead agency of a particular RTP project shall ensure that all structures be designed and constructed to the latest geotechnical standards. In most cases, this will necessitate site-specific geologic and soils engineering investigations to exceed the code for projects that are identified to be in zones subject to high ground shaking during seismic activity and/or fault rupture zones. **MM G-2(b)** The lead agency of a particular RTP bridge or passenger station project shall ensure that these structures are placed in areas outside of fault rupture zones. If avoidance is not possible, detailed geologic and seismic studies must be conducted by a certified geotechnical engineer to locate active or potentially active fault traces. Structures shall then be placed outside of an appropriate setback distance as determined by a certified geotechnical engineer.	*Less than significant*
3.8 Hazards		
Impact H-1: Implementation of certain RTP projects involve the routine use and transport of certain hazardous materials during construction. However, such use would not appear to introduce significant impacts, but at least, related to transport, the	None required	*Less than significant*

Impacts of the Proposed Plan	Mitigation Measures	Significance After Mitigation
RTP would improve the condition of some roadways, reducing to some extent the potential for roadway accidents that could result in transport-related hazardous material spills. This would be considered a Class III, *less than significant*, impact.		
Impact H-2: Implementation of the proposed RTP could emit or create a hazard to the public or the environment by locating new or expanded roadways or transit alignments that transport hazardous materials within one-quarter mile of a school. While such projects are not anticipated, the potential, nevertheless, exists. This would be considered a Class II, *significant, but mitigable*, impact.	**MM H-2** The lead agency of a particular RTP project shall ensure that the project site, if located within one-quarter -mile of a school, is not listed on the California Department of Toxic Substances Control (DTSC).	*Less than significant*
Impact H-3: Implementation of certain 2019 RTP projects could create a hazard to the public or the environment through the disturbance of contaminated property during the project-specific implementation. This	**MM H-3** The lead agency shall investigate the potential for improvement projects to be located at, or in the vicinity of, identified Department of Toxic Substances Control (DTSC) hazardous material sites or to be located in areas that contain aerial-deposited lead, naturally occurring asbestos, or other hazardous materials. Site-specific evaluation should include a historical assessment of past uses, and soil sampling should be conducted when determined appropriate by the lead agency. In those instances where a specific	*Less than significant*

Impacts of the Proposed Plan	Mitigation Measures	Significance After Mitigation
would be considered a Class II, *significant but mitigable*, impact.	project site is found to be contaminated by hazardous materials, the site shall, where appropriate, be cleaned up to the standards of the appropriate regulatory agency. Appropriate remediation measures to ensure worker safety during construction shall, where appropriate, be identified prior to the commencement of earthmoving activities, subject to the review and approval of the DTSC. Ideally, such "Phase II-type" investigations should be commissioned prior to initiation of the site-specific EIR, and typically in coordination with other affected agencies, such as Regional Water Quality Control Board, Air Pollution Control Board, and County Environmental Health.	
Impact H-4: Implementation of certain RTP projects could be located in or near a fire hazard zone or near an airport/airstrip. This would be considered a Class III, *less than significant*, impact.	None required	*Less than significant*
Impact H-5: The construction of roadway projects in the RTP could temporarily interfere with emergency response/evacuation plans. This would be considered a Class II, *significant, but mitigable* impact.	**MM H-5:** For all transportation projects that could result in temporary lane closures or access blockage during construction, a temporary access plan shall be implemented, in consultation with the County Office of Emergency Services (OES), in order to ensure continued access of emergency vehicles, or to carry out an evacuation.	*Less than significant*
3.9 Land Use		
Impact LU-1: During construction, many RTP projects would result in	**MM LU-1:** For all transportation projects that could result in temporary lane closures or access blockage during construction, a temporary access plan shall	*Less than significant*

Impacts of the Proposed Plan	Mitigation Measures	Significance After Mitigation
temporary lane closures or other access restrictions that could disrupt existing residences, businesses, and pedestrian, bicycle, and transit routes. This is considered a Class II, *significant but mitigable,* impact.	be implemented to ensure continued access to affected bicyclists, pedestrians, homes and/or businesses. The plan shall include, but not be limited to, temporary signage directing traffic and providing safe access in and around construction zone, as well as shuttles to take bicyclists and pedestrians beyond the active construction zones.	
Impact LU-2: The 2019 RTP includes policies that guide development under the plan. Policies in the RTP are consistent with other regional and local transportation policies. This would be considered a Class III, *less than significant*, impact.	None required	*Less than significant*
Impact LU-3: Implementation of certain RTP projects may create land use conflicts with existing sensitive land uses and/or residential development. This is considered a Class II, *significant but mitigable*, impact.	**MM LU-3(a)** The lead agency for the particular 2019 RTP project shall ensure that setbacks, fences, or other appropriate means shall be used to separate transportation facilities with the potential to generate land use conflicts from adjacent sensitive land uses. Roadways shall be designed to minimize potential impacts to pedestrians and bicyclists, particularly those living in adjacent residential areas or attending nearby schools. Adequate striping, signs, and signalization shall be installed to slow traffic, where appropriate, and to reduce safety and noise impacts. **MM LU-3(b)** The lead agency of a particular 2019 RTP project shall ensure that street lighting, where necessary, is minimized to the extent possible in	*Less than significant*

Impacts of the Proposed Plan	Mitigation Measures	Significance After Mitigation
	areas adjacent to sensitive land uses. Streetlights shall be shielded and oriented away from residential development.	
3.10 Noise		
Impact N-1: Construction activity associated with road, bike, pedestrian, transit, rail, and airport projects would create temporary noise level increases in discrete locations throughout the county over the life of the RTP. This is considered a Class II, *significant but mitigable*, impact.	**MM N-1(a)** The lead agency of a particular RTP project shall ensure that, where residences or other noise-sensitive uses are located near construction sites, appropriate measures shall be implemented to ensure consistency with noise ordinance requirements relating to construction. Specific techniques may include, but are not limited to, restrictions on construction timing, use of sound blankets on construction equipment, and the use of temporary walls and noise barriers to block and deflect noise. **MM N-1(b)** If a particular project located adjacent to noise-sensitive receptors requires pile driving, the lead agency shall require the use of techniques to the maximum extent feasible in order to reduce the associated noise and vibratory impacts. This shall be accomplished through the placement of conditions on the project during its individual environmental review. In extreme cases, due to proximity, duration, or intensity, the impact of pile driving may not be mitigable, short of providing compensation for temporary relocation of residents, or alternative compensatory arrangements. The subsequent CEQA and/or NEPA review should consider requiring specific conditions of approval to mitigate significant impacts associated with pile driving.	*Less than significant*
Impact N-2: Various RTP projects could potentially expose sensitive receptors to noise in excess of normally acceptable levels. Projects that increase use of existing roadways, rail lines, and	**MM N-2:** The lead agency of a particular RTP project shall ensure that proposed transportation projects are analyzed, in accordance with applicable CEQA and/or NEPA requirements (if applicable), for potential noise and groundborne vibration impacts to nearby noise-sensitive land uses. Noise and groundborne vibration studies shall be conducted in accordance with applicable federal, state, and local requirements. Where significant impacts are	*Significant and unavoidable*

Impacts of the Proposed Plan	Mitigation Measures	Significance After Mitigation
other transportation facilities, or realign such facilities, could result in substantial increases in noise levels at adjacent receptors. This would be considered a Class I, *significant and unavoidable*, impact.	identified, mitigation measures shall be implemented to reduce identified adverse impacts. Noise reduction measures may include, but are not necessarily limited to, the following: • Construction of acoustic barriers to shield nearby noise-sensitive land uses. For aesthetic concerns, the use of sound barriers, or any other architectural feature that could block views from a scenic highway or other sensitive view corridors, shall be discouraged. Long expanses of walls or fences should be interrupted with offsets and provided with accents to prevent monotony. Whenever possible, a combination of construction elements should be used, including solid fences, walls, and landscaped berms. • Site/project redesign and use of buffers to ensure that future development is compatible with transportation facilities. • Changes to transportation facility design. Examples include changes in proposed roadway alignment or construction of roadways so that they are below grade relative to nearby sensitive land uses to create an effective barrier between the roadway and sensitive receptors. • Use of low-noise pavements (e.g., rubberized asphalt).	
Impact N-3: Construction activity associated with RTP projects would create temporary increases in groundborne vibration levels in discrete locations throughout the county over the life of the RTP. This is	**MM N-3:** Implement mitigation measures MM N-1(a), MM n-1(b), and MM N-2.	*Less than significant*

Impacts of the Proposed Plan	Mitigation Measures	Significance After Mitigation
considered a Class II, *significant but mitigable*, impact.		
3.11 Public Services		
Impact PS-1: Implementation of certain RTP roadway projects could temporarily interfere with transportation-related public services, such as police, fire, and/or emergency services and response times and/or access to other public facilities, including government facilities, schools, and parks due to temporary construction-related activities. This would be considered a Class II, *significant but mitigable*, impact.	**MM PS-1**: For all transportation projects that could result in temporary lane closures or access blockage during construction, a temporary access plan shall be implemented, in consultation with the County Office of Emergency Services (OES), in order to ensure continued access of emergency vehicles, or to carry out an evacuation.	*Less than significant*
Impact PS-2: Implementation of certain RTP roadway projects could affect demand for solid waste and wastewater services in the county. This would be considered a Class II, *significant but mitigable,* impact.	**MM PS-2** The lead agency of a particular RTP project shall evaluate the impacts of demand on solid waste and wastewater services. • Particular RTP projects requiring solid waste or wastewater services will coordinate with the local public works department to ensure that the existing public services and utilities would be able to accommodate the increase. • The amount of solid waste generated during construction will be estimated prior to construction, and appropriate disposal and/or recycling sites will be identified and utilized in accordance with the criteria and diversion strategies established in the Integrated Waste Management Plan and	*Less than significant*

Impacts of the Proposed Plan	Mitigation Measures	Significance After Mitigation
	respective local City Source Reduction and Recycling Element. Coordination is essential and highly recommended with appropriate agency staff where major transportation projects are concerned.	
3.12 Population, Housing and Employment		
Impact POP-1: Implementation of certain RTP roadway projects will not induce substantial population growth in an area. The proposed project will not directly result in new development of housing or employment centers or extend roads or other infrastructure that would expose substantial new areas to unplanned growth. This is considered a Class III, *less than significant,* impact.	None required	*Less than significant*
Impact POP-2: Implementation of some RTP projects is not expected to result in the displacement of people and/or existing housing units, as well as businesses, and further, would not result in the need to construct additional housing units in the county over the planning horizon. This is considered a Class III, *less than significant*, impact.	None required	*Less than significant*

Impacts of the Proposed Plan	Mitigation Measures	Significance After Mitigation
3.13 Transportation		
This PEIR incorporates action strategies that serve to improve LOS levels and decrease VMT and VHT in the region through the implementation of projects to reduce congestion, coupled with alternative transit improvement programs. These policies, complemented with SLOCOG investments in transit and ride-sharing programs, active transportation (bicycle and pedestrian) improvements, and other travel demand management measures, would help improve future VMT and VHT, and generally, LOS as well. However, despite the many benefits, this approach can encourage higher densities and slower speeds, which may conflict with congestion management goals. However, this would not result in a significant impact per the new (November 2018) CEQA Guidelines, as	None Required	*Less than significant*

Impacts of the Proposed Plan	Mitigation Measures	Significance After Mitigation
discussed in Section 3.13, Transportation. The proposed project is not anticipated to cause a substantial increase in hazards due to design features or incompatible uses. The RTP does not propose any changes in air traffic patterns. The RTP does not conflict with adopted policies, plans, or programs supporting alternative transportation. On the contrary, the RTP includes active transportation projects for the region, including bicycle / pedestrian projects that would carry out components of the County's and incorporated communities' bicycle plans and would implement local policies associated with alternative modes of transportation. Emergency access could potentially be affected during construction activities associated with implementation of various		

Impacts of the Proposed Plan	Mitigation Measures	Significance After Mitigation
roadway and transit improvement projects identified in the RTP. However, mitigation measures have been included to reduce this impact to a less than significant level (See Hazards, Section 3.8). Therefore, potential impacts associated with transportation would be Class III, *less than significant*.		
3.14 Water Resources		
Impact W-1: Construction and maintenance of certain RTP projects could incrementally increase countywide water demand, potentially contributing to insufficient water supplies, particularly during a drought conditions. Such impacts would be Class II, *significant but mitigable*, impacts.	**MM W-1(a)** Ensure that lead agency should encourage the use of reclaimed water for dust suppression during construction activities. **MM W-1(b)** Ensure that low-water-use landscaping (i.e., drought-tolerant plants and drip irrigation) is installed. **MM W-1(c)** Ensure that landscaping associated with improvements is maintained using reclaimed water to the maximum extent feasible. **MM W-1(d)** Encourage that porous pavement materials are utilized to allow for groundwater percolation. Rural bicycle trails shall be left unpaved, where appropriate.	*Less than significant*
Impact W-2: Construction of, and vehicular operations resulting	**MM W-2(a)** Project sponsors shall prepare and implement, as necessary, a Storm Water Pollution Prevention Plan (SWPPP) in accordance with the	*Significant and unavoidable*

Impacts of the Proposed Plan	Mitigation Measures	Significance After Mitigation
from, certain RTP projects could result in increased erosion and stormwater runoff, which could degrade surface water and groundwater quality. This would be considered a Class I, *significant and unavoidable* impact..	policies, requirements, and recommendations of the Countywide Stormwater Program Central Coast Water Board (CCWB). Typical components of a SWPPP would include the following: • Excavation and grading activities shall be scheduled for the dry season only (April 15 to October 15), to the extent feasible. This will reduce the chance of severe erosion from intense rainfall and surface runoff, as well as the potential for soil saturation in swale areas. • If excavation occurs during the rainy season, storm runoff from the construction area shall be regulated through a stormwater management/erosion control plan that may include temporary on-site silt traps and/or basins with multiple discharge points to natural drainages and energy dissipaters. Stockpiles of loose material shall be covered and runoff diverted away from exposed soil material. If work is stopped due to rain, a positive grading away from slopes shall be provided to carry the surface runoff to areas where flow can be controlled, such as the temporary silt basins. Sediment basin/traps shall be located and operated to minimize the amount of offsite sediment transport. Any trapped sediment shall be removed from the basin or trap and placed at a suitable location on-site, away from concentrated flows, or removed to an approved disposal site. • Temporary erosion control measures shall be provided until perennial revegetation or landscaping is established and can minimize discharge of sediment into nearby waterways. For construction within 500 feet of a water body, fiber rolls and/or gravel bags shall be placed upstream adjacent to the water body.	*cumulative impact*

Impacts of the Proposed Plan	Mitigation Measures	Significance After Mitigation
	• After completion of grading, erosion protection shall be provided on all cut-and-fill slopes. Revegetation shall be facilitated by mulching, hydroseeding, or other methods and shall be initiated as soon as possible after completion of grading and prior to the onset of the rainy season (by October 15). • Permanent revegetation/landscaping shall emphasize drought-tolerant perennial ground coverings, shrubs, and trees to improve the probability of slope and soil stabilization without adverse impacts to slope stability due to irrigation infiltration and long-term root development. • BMPs selected and implemented for the project shall be in place and operational prior to the onset of major earthwork on the site. The construction phase facilities shall be maintained regularly and cleared of accumulated sediment as necessary. • Hazardous materials such as fuels and solvents used on the construction sites shall be stored in covered containers and protected from rainfall, runoff, and vandalism. A stockpile of spill cleanup materials shall be readily available at all construction sites. Employees shall be trained in spill prevention and cleanup, and individuals should be designated as responsible for prevention and cleanup activities. SWPPP(s) for projects immediately adjacent to or within drainages would need to incorporate additional erosion control measures in order to avoid adverse effects on water courses. Such measures shall be determined in consultation with the Central Coast Water Board (CCWB).	

Impacts of the Proposed Plan	Mitigation Measures	Significance After Mitigation
	MM W-2(b) Ensure that adequate drainage infrastructure is in place to accommodate runoff from the project. If adequate drainage infrastructure is not available, the project proponent shall pay utility mitigation fees or otherwise provide improvements to the drainage facilities of the jurisdiction in which the project is located such that drainage facilities affected by the project in question maintain an acceptable level of service. **MM W-2(c)** Ensure that if a particular RTP project is located within or adjacent to a stream channel, the placement of any fill will not violate Federal of State water quality standards under Section 401 of the Clean Water Act. In addition, the lead agency must coordinate with the CDFW to identify any projects that would require a Streambed Alteration Agreement under Section 1603 of the Fish and Game Code.	
Impact W-3: Some RTP projects could be subject to high flood hazard. Impacts are considered Class II, *significant but mitigable*.	**MM W-3** If a particular RTP project is located in an area with high flooding potential, the lead agency shall ensure that the facility is designed to withstand a 100-year flood event, that feasible bank stabilization and erosion control measures are implemented along creek crossings, and that other measures are implemented as appropriate.	*Less than significant*
Impact W-4: Implementation of certain RTP projects may be located in areas subject to tsunami or seiche. This is considered a Class II, *significant but mitigable*, impact.	**MM W-4** If a particular RTP project is located in an area subject to tsunami effects, the lead agency shall evaluate tsunami inundation risks and incorporate features designed to minimize damage from a tsunami, such as: • Specifying final roadbed elevations greater than the expected height of a tsunami with a given return frequency. In addition, the lead agency shall ensure that early warning and evacuation plans for tsunami events are developed and implemented.	*Less than significant*

Impacts of the Proposed Plan	Mitigation Measures	Significance After Mitigation
	• Placing structures either at elevations above those likely to be adversely affected during a tsunami event, or designed to allow swift water to flow around, though, or underneath without causing collapse. • Using structures as buffer zones, providing front-line defenses, and securing foundations of expendable structures so as not to add to debris.	
3.15 Agricultural		
Impact AG-1: There is a possibility, although limited, that RTP projects would encroach upon agricultural and forest lands. Although the actual level of impact from individual projects cannot be not known at this time, this evaluation assumes that there could be some direct or indirect encroachment on agricultural or forest lands. This impact would be *significant, but mitigable, Class II*.	**MM AG-1(a)** When new roadway extensions are planned, the lead agency of a particular RTP project shall ensure that during project development feasible alternative alignments that reduce or avoid impacts to agricultural/ forest lands are considered. **MM AG-1(b)** The lead agency of a particular RTP project shall ensure that rural roadway alignments follow property lines to the extent feasible.	*Less than significant*

1.0 INTRODUCTION

This Program Environmental Impact Report (EIR) was prepared in accordance with the California Environmental Quality Act (CEQA) and State CEQA Guidelines. The State Guidelines were recently updated in November 2018 and, although despite the CEQA review process was already well underway with release of the Notice of Preparation (NOP) in January 2018, SLOCOG staff has made an effort to incorporate those changes in this EIR.

The prior 2010 EIR and 2014 Addendum relied upon San Luis Obispo County's local CEQA Guidelines, adopted in August 1995, which largely defer to the State Guidelines. The County Department of Planning and Building recently established a CEQA Working Group to update the County Guidelines in an effort to reflect local conditions, as implied by the term, "Local Guidelines." The County is required to update their local guidelines within 120 days of the State Guidelines update.

SLOCOG is the project sponsor and has responsibility for approving the *2019 Regional Transportation Plan* (*2019 RTP, RTP, or proposed project*). SLOCOG is also the CEQA Lead Agency, responsible for the environmental review of the RTP and certification of the Program EIR.

1.1 Purpose

SLOCOG, acting as the Lead Agency, prepared this EIR to provide the public and responsible and trustee agencies with information about the potential environmental effects of adopting and implementing the proposed 2019 RTP.

This EIR was prepared in accordance with the California Environmental Quality Act (CEQA). CEQA is part of the Public Resources Code (PRC), Sections 21000 et seq. The CEQA Guidelines govern the implementation of CEQA and are codified in the California Code of Regulations (CCR), Title 14, Chapter 3, Sections 15000 et seq. The Guidelines, therefore, have the force of law and are binding on state and local public agencies. The basic goal of CEQA is to develop and maintain a high-quality environment. CEQA applies to both, private and public projects, and the RTP is a public project.

Specific goals of CEQA are for California's public agencies to: 1. Identify the significant environmental effects of their actions; and, either 2. Avoid those significant environmental effects, where feasible; or 3. Mitigate those significant environmental effects, where feasible.

Under California law, each public agency must adopt local implementation guidelines to establish objectives, criteria, and specific procedures for administering CEQA and CEQA Guidelines (CEQA Section 21082 and State CEQA Guidelines Section 15022).

SLOCOG has previously relied upon the San Luis Obispo County Guidelines, as discussed earlier. However, in order to be compliant with the aforementioned CEQA requirements, SLOCOG is proposing to adopt the recently updated State Guidelines as its own agency guidelines. Section 15022 of the State CEQA Guidelines allows a public agency to adopt the State CEQA Guidelines as its local guidelines through incorporation by reference. This is scheduled to occur prior to adoption of the 2019 RTP. Sometime thereafter, SLOCOG anticipates developing its own local CEQA guidelines, particular to the needs of SLOCOG and its constituents.

CEQA requires the preparation of an EIR prior to approving any project that may have a significant effect on the environment. For the purposes of CEQA, the term project refers to the whole of an action which has the potential for resulting in a direct physical change or a reasonably foreseeable indirect physical change in the environment (State CEQA Guidelines Section 15378(a)). With respect to the proposed 2019 RTP, SLOCOG has determined that the proposed plan is a project within the definition of CEQA.

As described in the State CEQA Guidelines Section 15121(a), an EIR is a public informational document that (1) assesses potential environmental effects of the proposed project, and (2) identifies alternatives and mitigation measures to the proposed project that could reduce or avoid its adverse environmental impacts. Per CEQA, public agencies are charged with the duty to consider and minimize environmental impacts of proposed projects where feasible, and an obligation to balance a variety of public objectives, including economic, environmental, and social factors.

1.2 Lead, Responsible, and Trustee Agencies

The CEQA Guidelines define lead, responsible, and trustee agencies. The CEQA Lead Agency is the public agency that has the primary responsibility for carrying out or approving a project. SLOCOG has discretionary authority for approving the 2019 RTP and is the CEQA Lead Agency responsible for preparing the EIR.

For the purpose of CEQA, the term trustee agency means a state agency having jurisdiction by law over natural resources affected by a project, which are held in trust for the people of the State of California. Specifically, the following agencies may have an interest in the implementation of the 2019 RTP and may be a trustee agency for the proposed project:

- California Department of Fish and Wildlife (CDFW)
- State Lands Commission
- California Coastal Commission (CCC)

In CEQA, the term *responsible agency* refers to all public agencies other than the Lead Agency that may have discretionary actions associated with the implementation of the 2019 RTP. The following agencies may have a role in the implementation of the 2019 RTP, and are, therefore, identified as potential responsible agencies:

- California Department of Conservation
- California Department of Forestry/SLO County Fire Department
- California Department of Transportation (Caltrans) District 5, Environmental Planning and Engineering
- Caltrans, Division of Aeronautics
- California Division of Mines and Geology
- California Department of Parks and Recreation
- California Department of Water Resources
- California Integrated Waste Management Board
- California Public Utilities Commission
- California Transportation Commission
- City of Arroyo Grande
- City of Atascadero
- City of Grover Beach
- City of Morro Bay
- City of Paso Robles
- City of Pismo Beach
- City of San Luis Obispo
- County of San Luis Obispo
- San Luis Obispo Regional Transit Authority
- Central Coast Regional Water Quality Control Board, Region 3
- Local Agency Formation Commission of San Luis Obispo County
- San Luis Obispo County Air Pollution Control District
- U.S. Army Corps of Engineers
- U.S. Bureau of Land Management
- U.S. Bureau of Reclamation
- U.S. Environmental Protection Agency
- U.S. Fish and Wildlife Service

1.3 Type of Document

The CEQA Guidelines identify several types of EIRs, each applicable to different project circumstances. This EIR has been prepared as a **Program EIR** pursuant to State CEQA Guidelines Section 15168. Program EIRs are defined by the CEQA Guidelines (Section 15168) as:

> *…an EIR, which may be prepared on a series of actions that can be characterized as one large project and are related either:*
>
> - *geographically,*

- *as logical parts in the chain of contemplated actions,*
- *in connection with issuance of rules, regulations, plans or other general criteria to govern the conduct of a continuing program, or*
- *as individual activities carried out under the same authorizing statutory or regulatory authority and having generally similar environmental effects which can be mitigated in similar ways.*

As such, this EIR presents a region-wide assessment of the 2019 RTP's potential impacts. Though the EIR identifies some of the possible impacts of individual projects, it does not evaluate site-specific impacts of individual projects. The program-level analysis considers the broad environmental effects of the overall proposed 2019 RTP. This EIR will be used to evaluate subsequent projects under the proposed 2019 RTP consistent with CEQA and the State CEQA Guidelines. When individual projects or activities subject to the 2019 RTP are proposed, the responsible lead agency would be required to examine the projects or activities to determine whether their effects were adequately analyzed in the EIR. Should projects or activities have no effects beyond those analyzed in this EIR, no further CEQA compliance would be required.

1.4 Roadmap - How to Use this EIR

This EIR is intended to evaluate the environmental impacts of adoption and implementation of the 2019 RTP. As discussed above in Subsection 1.3, this document is a Program EIR. A Program EIR necessarily deals with issues on a level of broad generalities, and due to the nature of the proposed project, is not as detailed as an EIR for a specific project. The program-level analysis addresses the probable environmental impacts of basic policies and programs, general cumulative effects, and programmatic mitigation measures and alternatives.

The environmental impacts of such an update are assessed at a "program" level of detail that is conceptual and general, because site-specific plans or other project-level details are not a component of the proposal. As a result, this document does not accommodate individual project approvals. Rather, the Program EIR is intended to serve as a first-tier environmental document for future projects in accordance with the 2019 RTP. As future projects are proposed in accordance with the 2019 RTP, additional project-level environmental review pursuant to CEQA may be required.

1.5 Scope and Organization

This EIR includes all notices and other procedural documents pertinent to an EIR, as well as all technical material prepared to support the analysis. State CEQA Guidelines Sections 15122–15132 identify the content requirements for Draft and Final EIRs. An EIR must include a description of the environmental setting, an environmental impact analysis,

mitigation measures, cumulative impacts, alternatives, significant irreversible environmental changes, and growth-inducing impacts. The environmental issues addressed in this EIR were established through review of environmental documentation developed for the proposed project, environmental documentation for nearby projects, agency consultation, and review of the proposed project and responses to the Notice of Preparation.

This EIR includes two volumes. Volume I includes the Executive Summary, Introduction, Project Description, Impact Analyses, Alternatives Analyses, Cumulative Impacts Analyses, Other Sections Required by CEQA, and the Project Preparers and Reference. Volume II includes key documents related to the EIR.

Volume I

The purpose of each chapter in Volume I is as follows:

Executive Summary

Per State CEQA Guidelines Section 15123 (Executive Summary), this chapter includes a summary of the EIR, a table that summarizes each of the significant impacts (following S.5) of the proposed project, mitigation measures for each significant impact where feasible, and the level of significance of each impact after mitigation. It also includes a summary project description, summary of other alternatives, and a discussion of any unresolved planning issues.

Chapter 1.0 – Introduction

This section provides an introduction and overview describing the intended use of the EIR and the review and certification process.

Chapter 2.0 – Project Description

A project description that provides the appropriate level of information necessary for the evaluation and review of environmental impacts is required under CEQA (State CEQA Guidelines Section15124). The project analyzed in this EIR is the 2019 RTP. This chapter includes a description of the proposed project location and geographic characteristics of the project area; background and history of the RTP process; objectives of the 2019 RTP; a general description of the proposed project's technical, economic, and environmental characteristics; intended uses of the EIR; and the discretionary actions associated with the 2019 RTP.

Chapter 3.0 – Environmental Setting, Impacts, and Mitigation Measures

This chapter contains an analysis of environmental topic areas as identified through the scoping process of the EIR. Each section contains a description of the existing setting, provides a summary of the regulatory environment, identifies project-related impacts, summarizes policies within the proposed 2019 RTP that provide mitigation for any identified potential impacts, and, if necessary, recommends mitigation measures to reduce remaining potentially significant and significant environmental impacts.

Wherever possible, this EIR references specific 2019 RTP goals, policies, and implementation strategies that will serve to reduce the impacts of implementation of the project. The RTP was prepared with environmental factors in mind and is intended to be self-mitigating to the extent possible. The following major environmental topics are addressed in this chapter:

3.1 Aesthetics/Visual Resources
3.1 Air Quality
3.2 Biological Resources
3.3 Climate Change
3.4 Greenhouse Gas Emissions/Climate Change
3.5 Cultural and Tribal Cultural Resources
3.6 Energy Resources
3.7 Geology and Seismicity
3.8 Hazards and Hazardous Materials
3.9 Land Use
3.10 Noise
3.11 Public Services and Utilities
3.12 Population, Housing, and Employment
3.13 Transportation and Circulation
3.14 Water Resources
3.15 Agricultural Resources

Chapter 4.0 – Alternatives

CEQA Guidelines Section 15126.6 requires that an EIR describe a range of reasonable alternatives to the proposed project, which could feasibly attain the basic objectives of the proposed project and avoid and/or lessen the environmental effects. A comparative analysis of these alternatives is contained in this chapter. The determinations of SLOCOG concerning the feasibility, acceptance, or rejection of each and all alternatives considered in this EIR will be addressed in SLOCOG's findings, as required by CEQA.

Chapter 5.0 – Cumulative Impacts

This chapter discusses the cumulative impacts associated with the proposed project (i.e., the 2019 RTP) when combined with other past, present, and future projects that are reasonably foreseeable.

Chapter 6.0 – Other Sections Required by CEQA

This chapter contains discussions and analysis of various topical issues mandated by State CEQA Guidelines Section 15126.2. These issues include significant environmental effects that cannot be avoided, significant irreversible environmental changes, and growth-inducing impacts if the proposed project is implemented.

Chapter 7.0 – Report Preparers and References

This chapter provides a list of persons responsible for EIR preparation and a list of materials used and persons contacted in its development.

Appendices

Appendix A Notice of Preparation and Responses

Appendix B Mitigation Monitoring and Reporting Program (MMRP)

Volume II

Key documents related to the EIR are made available as part of Volume II, Documents and Technical Appendices, including:

Appendix C Proposed 2019 San Luis Obispo Council of Governments Regional Transportation Plan and Sustainable Communities Strategy (SLOCOG 2019 RTP) – Incorporated by Reference

Appendix D San Luis Obispo County areas of potential flooding, erosion, and wetland migration due to Climate Change

Appendix E Energy Resources Fuel Consumption

1.6 CEQA Review Process, State CEQA Guidelines, and Significance Thresholds

The review and certification process for the EIR involves the following general procedural steps:

Notice of Preparation

Upon deciding that an EIR is required, the lead agency must file a Notice of Preparation (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 (CEQA Guidelines Section 15082; Public Resources Code Section 21092.2). In accordance with State CEQA Guidelines Section 15082, SLOCOG prepared a Notice of Preparation of an EIR for the proposed project on January 9, 2018. SLOCOG was identified as the CEQA Lead Agency for the proposed project.

The NOP must be posted in the County Clerk's office for 30 days. This notice was circulated to the public, local, state, and federal agencies, and other interested parties to solicit comments on the proposed project.

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. SLOCOG held a scoping meeting, from 4:00 to 7:00 p.m. on January 22, 2018, in the San Luis Obispo City-County Library Conference Room to receive comments. A public hearing was also held at the SLOCOG Board Meeting on February 7, 2018 in the County Government Center, San Luis Obispo, at which additional agency and public input on the scope of the project was solicited. Concerns raised in response to the NOP were considered during preparation of the Draft EIR. The NOP and responses by interested parties are presented in **Appendix A**.

Comments Received on the Notice of Preparation

In accordance with CEQA, a good faith effort has been made during the preparation of this EIR to contact affected agencies, organizations, and persons who may have an interest in the proposed project. This included the circulation of a Notice of Preparation (NOP) in compliance with CEQA Guidelines Section 15082. The NOP was circulated on January 9, 2018. The NOP and comments received on the NOP from public agencies and interested parties are contained in **Appendix A**.

Representatives from various agencies, including the San Luis Obispo County Air Pollution Control Agency (SLOCAPCD), Native American Heritage Commission (NAHC), California Department of Transportation (Caltrans), and the State of California Governor's Office of Planning and Research (OPR) have communicated in writing regarding the proposed project. Comments received from these agencies have been addressed in this EIR.

Draft EIR and Public Notice/Public Review

This document constitutes the Draft EIR. The Draft EIR contains (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.

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). The lead agency must send a copy of its notice to anyone requesting it (CEQA Guidelines Section 15087). Additionally, public notice of DEIR 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 DEIR from responsible and trustee agencies and from adjacent cities and counties (Public Resources Code Sections 21104 and 21253).

Upon completion of the Draft EIR, SLOCOG will file the Notice of Completion (NOC) with the Governor's Office of Planning and Research to begin the public review period (Public Resources Code, Section 21161). Concurrent with the NOC, SLOCOG will provide public notice of the availability of the DEIR for public review and invite comment from the public,

agencies, organizations, and other interested parties. The minimum public review period for a DEIR is 30 days.

When a DEIR, such as this one, is sent to the State Clearinghouse for review, the public review period must be a minimum 45 days unless a shorter period is approved by the Clearinghouse (Public Resources Code Section 21091). Distribution of the DEIR may be required through the State Clearinghouse (CEQA Guidelines Section 15305). The public review and comment period will be no less than 45 days.

Public comments on the DEIR will be accepted both in written form and orally at public hearings on the proposed project. Notice of the time and location of the hearings will be published in advanced. Additional information can be obtained at **www.slocog.org** . All comments or questions regarding the Draft EIR should be addressed to SLOCOG as noted below.

Morty Prisament, MSCP, AICP
Environmental and Special Projects
1114 Marsh Street
San Luis Obispo, CA 93401
Tel: 805-781-4219
EIR@slocog.org

Response to Comments/Final EIR

Following the public review period, a Final EIR will be prepared. The Final EIR will respond to written comments received during the public review period. Public agencies will be provided with copies of the responses to their comments at least 10 days prior to EIR certification. The FEIR will include the DEIR, copies of comments received during public review, a list of persons and entities commenting, and responses to comments.

Certification of the EIR/Project Consideration

The lead agency shall certify: (a) the FEIR has been completed in compliance with CEQA; (b) the FEIR was presented to the decision-making body of the lead agency; and (c) the decision-making body reviewed and considered the information in the FEIR prior to approving a project (CEQA Guidelines Section 15090). As the final decision maker regarding the 2019 RTP, the SLOCOG Board will review and consider the Final EIR.

If the Board finds that the Final EIR is "adequate and complete," the Board will certify the Final EIR. Upon review and consideration of the Final EIR, the SLOCOG Board may take action to adopt, revise, or reject the 2019 RTP. A decision to approve the proposed project would be accompanied by written findings in accordance with State CEQA Guidelines Sections 15091 and 15093. A Mitigation Monitoring and Reporting Program (MMRP), as described below, would also be adopted for mitigation measures that have been incorporated into or imposed

upon the proposed project to reduce or avoid significant effects on the environment. This MMRP will be designed to ensure that these measures are carried out during RTP implementation.

Findings/Statement of Overriding Considerations

For each significant impact of the proposed project identified in the EIR, the lead or responsible agency must find, based on substantial evidence, that (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 (CEQA Guidelines Section 15091). If an agency approves a project with unavoidable significant environmental effects, it must prepare a written Statement of Overriding Considerations that sets forth the specific social, economic, or other reasons supporting the agency's decision. Should the analysis in the EIR find that implementation of the proposed project would entail unavoidable significant environmental effects, SLOCOG will write a Statement of Overriding Considerations.

Mitigation Monitoring

Public Resources Code Section 21081.6(a) requires lead agencies to adopt an MMRP to describe measures that have been adopted or made a condition of project approval in order to mitigate or avoid significant effects on the environment. The specific reporting or monitoring program required by CEQA is included as **Appendix B** of this document, and mitigation measures have been clearly identified and presented in language that will facilitate establishment of the monitoring and reporting program.

Notice of Determination

An agency must file a Notice of Determination (NOD) after deciding to approve a project for which an EIR is prepared (CEQA Guidelines Section 15094). 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 (Public Resources Code Section 21167[c]). Assuming eventual approval of the 2019 RTP, SLOCOG will prepare an NOD at that time.

2.0 PROJECT DESCRIPTION

The specific characteristics of the proposed project, including the project applicant, project characteristics, and project objectives, are described below.

2.1 Project Sponsor (Applicant)

San Luis Obispo Council of Governments (SLOCOG)
1114 Marsh Street
San Luis Obispo, CA 93401

2.2 Regional and Local Setting

The *2019 San Luis Obispo Council of Governments Regional Transportation Plan-* (SLOCOG 2019 RTP or "proposed project") addresses transportation needs in San Luis Obispo County. The county is located along California's Central Coast, as shown in **Figure 2.2-1**, San Luis Obispo County Location Map. The county 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. San Luis Obispo County was established in 1850, and the county seat is the City of San Luis Obispo.

Figure 2.2-1: San Luis Obispo County Location Map

Incorporated cities in the county include Arroyo Grande, Atascadero, Grover Beach, Morro Bay, Paso Robles, Pismo Beach, and San Luis Obispo. Urban concentrations and communities in the unincorporated portions of the county include Avila Beach, Cambria, Cayucos, Garden Farms, Heritage Ranch, Los Osos/Baywood Park, Nipomo, Oceano, San Simeon, Santa Margarita, Halcyon, San Miguel, Shandon, and Templeton.

The urban areas in the county are linked to the primary transportation corridors serving the region: State Routes 1 and 46 and US Highway 101. The City of San Luis Obispo is the employment, entertainment, education, and retail center of the region, both geographically and economically. The county's urban and populated areas are concentrated near cities such as San Luis Obispo, Atascadero, and Paso Robles and in rural communities such as Shandon and Nacimiento.

Transportation improvement projects proposed in the 2019 RTP are located on state highways, regionally significant roads, and some local streets, as well as within rail rights-of-way and on public lands. It should be noted that the 2019 RTP and this environmental impact report (EIR) refer to five discrete regions of the county: the North Coast, North County, Central County, South County, and East County sub-regions.

> The North Coast subregion stretches northwest from San Luis Obispo along SR 1 to the Monterey County line and includes the incorporated City of Morro Bay and the unincorporated communities of Cambria, Cayucos, Los Osos, and San Simeon. SR 1, designated as the San Luis Obispo North Coast National Scenic Byway, connects the region to the world-renowned seascapes of Big Sur.
>
> The North County stretches north of the Cuesta Grade to the Monterey County line, and east of the Santa Lucia Range. North County includes the incorporated cities of Atascadero and Paso Robles, and unincorporated communities of San Miguel, Santa Margarita, and Templeton – along the US 101 corridor. North County also includes: Shandon, 20 miles east of Paso Robles on the SR 46 East corridor; and Heritage Ranch and Oak Shores communities, northwest of Paso Robles and along the shoreline of Lake Nacimiento.
>
> The Central County Subregion generally comprises the City of San Luis Obispo, Cal Poly, and the communities that surround it, including the Edna Valley, Irish Hills, and Avila Beach and the areas north and east of the city that are located south of the Cuesta Grade.
>
> The South County Sub-region stretches south from the Ontario Grade near Pismo Beach to the Santa Maria River and Santa Barbara County line, west of the Santa Lucia Range and is comprised of the cities of Arroyo Grande, Pismo Beach, and Grover Beach and the unincorporated communities of Nipomo and Oceano.

The East County subregion is delineated by a regulatory boundary as opposed to a topographical boundary or clear economic market. In 2012, East County was designated as a federal non-attainment area for the National Ambient Air Quality Standard (NAAQS) eight-hour ozone. Only about 1,300 people live in East County, just 0.5 percent of the region's population.

Physical Features

According to the U.S. Census Bureau, San Luis Obispo County has a total area of 3,626 square miles, of which 3,304 square miles are land and 311 square miles are water. The county's coastline spans 96 miles. San Luis Obispo County has a temperate climate. On average, the warmest month is August, with temperatures ranging from 53 to 82 degrees Fahrenheit, and the coolest month is December, with temperatures ranging from 42 to 66 degrees Fahrenheit. The maximum average precipitation occurs in February (5.41 inches on average).

However, microclimates within the county differ in temperature and rainfall. Areas near the coast remain cooler and more temperate overall, while areas inland are hot in the summer and cool in the winter. Coastal areas have a higher rate of precipitation than inland areas. The county's microclimates affect the diversity and range of plant and animal species. The county includes a wide variety of habitats and ecosystems due to the weather differences. The topography is diverse but generally consists of rolling hills.

Land Uses

San Luis Obispo County is physically diverse, ranging from beaches to mountains and valleys. The majority of land in the county is used for agriculture (approximately 66 percent). The majority is used primarily for cattle grazing. (Crop Report 2017, www.slocounty.ca.gov). Production of wine grapes remains by far the top commodity, accounting for over $267 million in total value in 2017. Most of the county's remaining land is used for rural land uses and open space. Rural land uses are distributed throughout the county. Open space comprises large areas that extend northwest-southeast in the southern portion of the county's central area. Less than 10 percent of the county's land is identified as incorporated city or designated for urban land use. Current development patterns are often dominated by low-density, automobile-oriented development outside of the urbanized areas.

In recognition of the specific concerns of individual areas throughout the region, the unincorporated county is divided into five major Planning Areas— these subregions are identified as the North Coast, Central County, North County, South County, and East County planning areas.

The San Luis Obispo County General Plan, Land Use Ordinance, and other implementing ordinances currently guide the land uses in the unincorporated county. The incorporated cities in the county have their own general plans and land use ordinances that guide the land uses within their City limits.

2.3 Project Objectives

State and federal laws require regional transportation planning agencies to prepare and update the Regional Transportation Plan (RTP). RTPs are required to be updated every four to five years, depending upon air quality attainment status.

The California Transportation Commission's (CTC) 2017 Regional Transportation Plan Guidelines set forth the purpose of the RTP, which includes assessing current transportation modes and options, conducting a travel needs assessment, and documenting agency transportation funding expenditures and financing. RTPs must also identify needed transportation improvements and this must be sufficiently detailed to serve as a foundation for, both, federal funding program decisions, as well as facilitation of the NEPA/404 Integration process. The CTC Guidelines also addresses the need to employ performance measures, the need for ensure consistency between the RTP and other plans, and the need for cooperative planning with community organizations. Additionally, since adoption in 2009 of SB 375, the CTC Guidelines prescribe that a strategy be included to implement the purpose and intent of AB 32 and SB 375. As a result, both a strategy and performance measures are included in the 2019 RTP

Beyond what might be construed as procedural or informational requirements, the RTP must now include a specific strategy to achieve greenhouse gas (GHG) reduction goals. The Sustainable Community Strategy (SCS) thereby becomes a critical factor against which EIR alternatives are weighed. While neither CEQA nor the CEQA Guidelines impose limits on the project objectives, crafting too narrow of an objective could preclude meaningful analysis of project alternatives. SLOCOG must provide substantial evidence to support Board findings to support a conclusion that any of the alternatives were unfeasible.

The 2019 RTP focuses upon achieving Greenhouse Gas (GHG) reduction targets primarily through land use measures. SLOCOG has the opportunity to coordinate their planning efforts in a number of areas in order to meet SCS goals. Individual cities and County government maintain jurisdiction over land use planning within their respective boundaries. SLOCOG, as a Metropolitan Planning Agency, can nevertheless influence growth and development patterns through transportation programming, which influences the prioritization and funding of transportation projects - infrastructure siting and improvements, demand management, active transportation programs, transit facilities, etc.

2.4 Project Components and Characteristics

The RTP is a federally mandated (Title 23 U.S.C. Section 134) comprehensive long-range (20+ year) regional transportation plan. The Sustainable Communities Strategy (SCS) is a major element of this planning effort, intended to address the issue of climate change, consistent with the California Global Warming Solutions Act of 2006 (AB32) and SB 375 (2008).

The stated purpose of the project (2019 RTP) is to guide transportation planning and programming, such as via the Regional and Federal Transportation Improvement Program. In this way, the 2019 RTP sets priorities for transportation projects and associated funding for implementation.

In California, regional transportation plans consist of four main components, which are specified in Government Code 65080, as follows:

- **Policy Element:** Reflects the mobility goals, policies, and objectives of the region, thus providing a regional vision to guide development of project lists and funding expenditures. A number of RTP policies and action strategies either directly or indirectly reduce environmental impacts. These policies are an integral part of the Plan, they are not considered mitigation measures. Rather, mitigation measures are those added afterward as part of the environmental review process in order to reduce or eliminate potential project environmental impacts.

- **Action Element:** Identifies programs and actions to implement the RTP. This element comprises a list of actions and programs being considered in the county by various agencies. Such projects may include the more traditional streets and roads, as well as projects and programs to facilitate transit and alternative modes. These are presented and analyzed at a general level of detail in the EIR consistent with the programmatic approach.

- **Financial Element:** Identifies the cost of implementing RTP projects, considering a financially constrained environment. The Investment Program of the RTP, which includes the state-mandated Action and Financial elements, identifies projects, programs, and actions necessary to implement the policy element of the 2019 RTP and fill gaps in the regional transportation network, as well as identifies the funds available to the region in the next 25 years and additional funding needs.

- **Sustainable Communities Strategy:** This Element applies to RTPs adopted after 2011, the intent of which is to ameliorate transportation-related GHG emissions via land-use strategies pursuant to AB 32 and prepare for the integration of SB 375 (previously described). The land-use scenarios developed in the Plan have been used in the EIR as a basis for the Alternatives Analysis, which will yield a Superior, or Environmentally Preferred, Alternative.

Policy Element

The Policy Element directly reflects the legislative, planning, financial, and institutional history that has shaped the region's transportation system. It is intended to frame and drive actions that will affect the direction and nature of transportation and its impact on the region. This can be accomplished in two ways: reinforcing positive opportunities and trends already in place, or stimulating new opportunities to achieve certain outcomes.

Legislation requires that the objectives be linked to a specific time period for implementation, namely short-range (within 10 years) and long-range (over 10 years). However, most objectives are considered on an ongoing basis and integrated into the continuing activities of the agency as opportunities arise. Each objective is linked, often in several ways, to needs identified in the RTP to strengthen the linkage between statewide system planning and ultimate project implementation.

The 2019 RTP set of goals, policies and strategies is primarily a refinement of those previously adopted by the SLOCOG Board in prior plans. The 2014 RTP/SCS continued the emphasis on maintaining and enhancing existing infrastructure and community core areas, organizing policies under broad goals and grouping them by transportation mode. This trend has continued with the 2019 Plan, except there is now far greater emphasis on the Plan's fourth element, the SCS. There is also more emphasis on performance measures in developing policy-driven financial strategies that support the RTP Investment Program.

The goals for the proposed 2019 RTP address preservation, mobility and accessibility, economy, safety and security, healthy communities and social equity, and environmental and fiscal stewardship. These regional goals, which have been developed to guide the transportation system decision-making process, are discussed in more detail as follows:

Figure 2.4-1: 2019 RTP Goals and Policies

GOAL	#	POLICY OBJECTIVES
Preservation		
1. Preserve the transportation system	1.1	Maintain and maximize efficiency of existing transportation system and operations.
	1.2	Employ low-cost solutions whenever possible, including transportation demand management principles.
	1.3	Preserve the region's transportation system to a state of good repair.
Mobility		
2. Improve intermodal mobility and accessibility for all people	2.1	Provide reliable, integrated, and flexible travel choices across and between modes.
	2.2	Improve opportunities for businesses and citizens to easily access goods, jobs, services, and housing.
	2.3	Integrate new technologies and concepts to make the transportation system more efficient and accessible.
	2.4	Identify and improve major transportation corridors for all users.
	2.5	Support cooperative planning activities that lead to an integrated intermodal transportation system.
Economy		
3. Support a vibrant economy	3.1	Support transportation investments and choices to enhance economic activity, travel, and tourism.
	3.2	Improve the freight network and strengthen the region's ability to access national and international trade markets.
Safety		
	4.1	Reduce fatalities, serious injuries, and collisions for motorized and non-motorized users.
	4.2	Reduce congestion and increase safety by improving operations.

4. Improve public safety and security	4.3	Enhance public safety and security in all modes of transportation.
Healthy Communities		
5. Foster livable, healthy communities and promote social equity	5.1	Reflect community values while integrating land use and transportation planning to connect communities through a variety of transportation choices that promote healthy lifestyles.
	5.2	Integrate public health and social equity in transportation planning and decision-making.
	5.3	Support efforts to increase the supply and variety of housing, jobs, and basic services in locations that reduce trips, travel distances, and congestion on U.S. Route 101.
	5.4	Make investments and develop programs that support local land use decisions that implement the SCS and other strategies to reduce GHG emissions and make our communities more healthy, livable, sustainable, and mobile.
Environment		
6. Practice environmental stewardship	6.1	Integrate environmental considerations in all stages of planning and implementation.
	6.2	Preserve aesthetic resources and promote environmental enhancements.
	6.3	Reduce GHG emissions from vehicles and improve air quality in the region.
	6.4	Conserve and protect natural, sensitive, and agricultural resources.
Fiscally Responsible		
7. Practice financial stewardship	7.1	Invest strategically to optimize transportation system performance for the long-term.
	7.2	Assure early and continual involvement of all parties affected by major transportation improvement projects and programs.
	7.3	Seek sustainable, flexible, and competitive funding to maintain and improve the transportation system.

To implement each goal, the 2019 RTP includes associated policy objectives each keyed to one of the basic goals described above. To aid in delivering the RTP and its goals, each mode, chapter, or element of the RTP has associated action strategies. These action strategies are organized by their respective chapters and are included in Chapter 3 of the RTP which is available for review in **Volume II, Technical Appendices**.

Each of the 2019 RTP goals include proposed performance measures to show to what degree, why, and how there has or has not been progress in achieving the goals. The recommended performance measures are unique subsets of the previously adopted objectives and policies. The 2019 RTP Performance Monitoring Program provides a technical basis for the analysis of programs and projects for consistency with the SCS, improves the ability of the region to distribute increasingly scarce transportation funds efficiently and effectively, provides feedback to policy-makers, and helps to assure the 2019 RTP conforms to state and federal requirements.

Action Element

The Action Element of the 2019 RTP expresses the goals and objectives contained in the Policy Element in the form of "products" or facilities and services that are intended to serve the public's transportation needs. The Action Element addresses regional transportation

issues and needs for all transportation modes (highways, streets, roads, public transit, railroad, maritime, bicycle, pedestrian, and equestrian use, as well as aviation facilities and services) over the next 25 years.

This element contains seven chapters to review each mode of travel and provides an overview chapter to: integrate the modes, review public health, and consider emerging technologies. Mode-specific chapters (1) provide an overview of existing needs, assumptions, forecasting, and potential alternative actions; (2) address each transportation network mode and evaluate needs and projects from state, regional, and local perspectives; and (3) address the five subregional areas in the county and each of the various incorporated cities and unincorporated communities.. The programs and projects identified in each of the modal chapter are supported with funding from the Financial Element.

The major components of the Action Element are derived from the general plan land use, circulation, and recreational elements of SLOCOG member agencies, Caltrans' Route Concept and Improvement Plans for various state highways, SLOCOG Corridor Studies and Plans, Transit Plans, the Coast Rail Improvement Plan, airport and harbor master plans, and ongoing efforts to implement the goals, objectives, and policies identified in the 2019 RTP Policy Element. Many components of the Action Element are designed to strengthen existing transportation networks, provide the connection between various transportation systems, and promote viable transportation options and community centers.

The Action Element provides the background and context for the programs and projects listed for development over the next 25 years. The short list, which contains those projects which are already moving forward, or are reasonably foreseeable, is specifically identified in investment lists. Programs and projects recommended in the RTP are a combination of short- and long-term activities that address regional transportation issues and needs.

Programs and projects are listed in RTP Chapter 8: Maximizing System Efficiency, Chapter 9, Highways, Streets, and Roads; Chapter 10: Active Transportation, Chapter 11: Public Transportation; and Chapter 12: Rail, Aviation, Freight and Harbors. Non-Motorized Transportation. The full text of the RTP is included in **Volume II, Documents and Technical Appendices,** of this EIR. The major transportation mode concepts and regionally substantial projects included in the RTP are summarized below.

Financial Element

The Financial Element is fundamental to the development and implementation of the RTP. It determines how much money is likely to be available to maintain, operate, and improve the region's transportation system over a 25-year period. As with past RTPs, SLOCOG developed a financially constrained element of the 2019 RTP, but also proposes that this RTP go beyond the financially constrained emphasis to include a larger set of projects and programs that would support an unconstrained project list. The unconstrained project list would assume additional funding sources of revenue (i.e., other unanticipated revenue such as federal

stimulus funding, special legislation, legislative priority funding, or a supplemental funding option).

This approach, on a policy basis, provides a more cohesive framework for planning for long-term transportation improvements and analyzing the interrelationships between transportation, air quality, land use, the economy, and other policy considerations. On financial grounds, this approach would anticipate new revenues beyond the financially constrained element and provide the opportunity to outline priority investments beyond the limits of existing funding sources. The Financial Element documents the financial assumptions that go into SLOCOG's 2019 RTP and discusses the financial constraints of each funding source and opportunities for funding the investment program contained in the Action Element. Typically, the Financial Element does not include policies that could have an environmental impact; therefore, as with prior EIRs, the analysis focuses mainly on the Policy and Action elements and the Sustainable Communities Strategy (described below).

Sustainable Communities Strategy

The SLOCOG Board approved the 2050 Regional Growth Forecast in 2017. The regional totals were used as the basis for all scenario development. Two primary factors were used to differentiate future land use scenarios: Type of housing: Larger-lot housing and compact housing, and Location of new growth: Using the regional growth forecast or improving upon the jobs-housing imbalance.

In terms of distribution of new housing and employment, Scenarios 1 and 2 prescribe to the distribution identified in the 2050 Regional Growth Forecast. Scenarios 3 and 4 improve the jobs-housing imbalance, shifting emphasis from jobs to housing in the Central County subregion, and increasing job growth in the North and South County subregions. Full details on scenario development are included in Chapter 13 of the RTP found in **Volume II, Technical Appendices,** of this EIR.

Land Use Strategies

The 2019 RTP is intended to promote the enhancement of regional and community livability, through the integration of strategies enhancing the economic vitality, environmental sustainability, one's sense of community, and accessibility to basic human services within and between communities of the region. The Plan's land use projects emphasize planning of compact communities, implementation of development and design standards, providing for mixed land use, balancing jobs and housing, concentrating growth in growth centers, designing circulation management policies and programs to encourage a modal shift to alternative transportation options, and employing traffic calming methods.

The 2019 RTP further advances connected community efforts and continues the Balanced Intermodal Investment Strategy from the Blueprint, the 2014 RTP, and prior RTPs to develop a land use pattern and transportation network that achieves GHG reduction targets using

both a jobs/housing balance and compact housing approaches. The public outreach results were supportive of this investment strategy and housing approach.

Socioeconomic data and Regional Land Use Model

The RLUM utilizes the forecasts for population, housing, and employment approved within SLOCOG's 2050 Regional Growth Forecast. The "preferred growth scenario" of the 2019 RTP for Future Years 2035 and 2045 reflects more recent assumptions for growth projections.

The SLOCOG Board adopted the *2050 Regional Growth Forecast* in June 2017, which used the Census 2010 as the basis for population and housing figures for the region. Additionally, the California Department of Finance (DOF) publishes population and housing estimates annually for all jurisdictions in the state; 2015 population and housing estimates from DOF; the forecast includes population, housing, and employment estimates in five-year increments from 2010 to year 2050. The SLOCOG Board adopted the "medium growth forecast" for population, housing, and employment forecast figures.

Future Year 2020 Scenario: One future land use scenario was developed for 2020. This scenario incorporates *proposed land use projects*. Given the near-term nature, this scenario includes land use projects recently completed (from 2015 to 2017), projects under construction, and other near-term projects expected to be completed by 2020.

Four future land use scenarios were developed for year 2035. Two primary factors were used to develop differentiation between the future land use scenarios:

- **Type of housing:** Larger-lot housing and compact housing (single family detached/attached, secondary unit/accessory dwelling unit, multi-family apartments, student housing, and senior housing).

- **Location of new growth:** Using the regional growth forecast or improving upon the jobs-housing imbalance.

In terms of distribution of new housing and employment, scenarios 1 and 2 prescribe to the distribution identified in the 2050 Regional Growth Forecast. Scenarios 3 and 4 improve the jobs-housing imbalance, shifting away from a Central County-focus (of employment growth) toward a more balanced growth in jobs in the North County and South County subregions.

Future Year 2035 Scenario 1: This scenario follows the 2050 Regional Growth Forecast for population, housing, and employment distribution. Of the expected new housing, 80% of new housing is large-lot, and 20% is compact housing.

Future Year 2035 Scenario 2**:** This scenario follows the 2050 Regional Growth Forecast for population, housing, and employment distribution. Of the expected new housing, 30% of new housing is large-lot, and 70% is compact housing.

Future Year 2035 Scenario 3: This scenario is meant to improve the jobs-housing imbalance between subregions, which modifies the housing and employment distribution from the 2050 Regional Growth Forecast. Of the expected new housing, 30% of new housing is large-lot, and 70% is compact housing.

Future Year 2035 Scenario 4: This scenario is meant to improve the jobs-housing imbalance between subregions, which modifies the housing and employment distribution from the 2050 Regional Growth Forecast. Of the expected new housing, 20% of new housing is large-lot, and 80% is compact housing.

Past RTPs

In 2010, SLOCOG adopted the **2010 RTP/pSCS** (preliminary Sustainable Communities Strategy) using the "Blueprint" (Community 2050) effort and its defined Target Development Areas (TDAs). This effort projected anticipated GHG emission reductions through the decrease in vehicle miles traveled (VMT) as a result of implementation of a comprehensive intermodal transportation investment strategy and better connections between land use and transportation projects.

Adopted in 2015, the **2014 RTP/SCS** re-evaluated projected reductions using improved land use, transportation and air quality modeling. The foundation of the 2014 RTP/SCS lay in better connecting communities through intermodal investments to our highway, transit, bicycle/pedestrian, and road networks, to our homes, schools, work, shopping, and other activities. This plan was also based on the "Blueprint" effort, TDAs, and an updated (2014) that laid out a comprehensive corridor approach including transportation demand management, public transportation, parallel route development, multimodal investments, and mainline operational and access improvements. The 2014 RTP/SCS achieved, and surpassed, the GHG reduction targets through an *aggressive, but achievable,* approach.

Maximizing System Efficiency

Maximizing System Efficiency, including Transportation Demand/System Management (TDM/TSM), Intelligent Transportation Systems (ITS) and Park & Ride lot, projects are listed in 2019 RTP Chapter 8, which is included in Volume II, Documents and Technical Appendices, of this EIR. TSM involves improvements to the efficiency and operation of existing transportation infrastructure to minimize the need for new or substantially expanded facilities, while TDM involves the use of methods to reduce demands on the roadway system. ITS involves the use of technologies that allow more efficient use of the existing road network. The primary goal of the TDM/TSM/ITS program is to increase transportation system efficiency, improve mobility and overall accessibility, reduce travel demand, and provide for improved air quality through the implementation of system management and transportation demand management strategies. In addition, this program is intended to develop and implement an integrated and modular ITS to improve safety, increase efficiency, reduce environmental impacts, and provide for ongoing monitoring and performance.

TSM/TDM programs target two key areas: (1) providing increased transportation options; and (2) focusing on the elimination or reduction of single-occupant motor vehicle trips. Certain transportation programs closely interrelated with these strategies have specific TSM/TDM objectives, including transit service improvements, ridesharing programs, bicycle/pedestrian facilities, complementary support measures by employers, economic incentives, parking supply and pricing management, alternative work hours, preferential high occupancy vehicle (HOV) treatment, park & ride lot improvements, and tolls and congestion pricing.

The objective of TSM, or operational improvement measures, is to maximize existing capacity on roadways without widening. These programs include alternative routes, signal synchronization, channelization, auxiliary lanes, ramp modifications, acceleration/deceleration lanes, ramp metering, and ITS applications. ITS applications include measures such as online video monitoring of freeway operating conditions and traveler information systems (e.g., placement of variable message signs).

TSM/TDM and ITS strategies along with park & ride lot improvements continue to promote carpools, vanpools, transit ridership, ridesharing, parking shuttles, telecommuting, complementary support measures by employers, economic incentives, parking supply and pricing management, alternative work hours, vanpools, EV charging stations, and tolls and congestion pricing.

Highways, Streets, and Roads Projects

Highways, streets and roads projects are listed in 2019 RTP Chapter 9 which is included in **Volume II, Technical Appendices,** of this EIR. The primary focus of this program is to implement a comprehensive strategy for the maintenance and improvement of state highways, routes of regional significance, and major local streets and roads to reduce peak hour traffic. In addition, the program addresses implementation of a comprehensive strategy for the maintenance and improvement of state highways, routes of regional significance, and major local streets and roads.

During the past several years since the last update of the RTP, the region has made progress in improving the regional transportation system by enhancing intermodal connections. In addition, several notable road improvements have been completed during the past several years and many more are in progress. Each local jurisdiction and Caltrans has proposed projects for the state highway or local roadway system within its jurisdiction. These projects address current and future roadway needs based on existing traffic conditions and projected traffic increases anticipated based on the growth accommodated in the jurisdiction's land use plans. The 2019 RTP highways, streets, and roads projects include road widenings and extensions, various improvements to interchanges or intersections, and construction of freeway overcrossings and interchanges.

Road widenings would be located along state highways in the City of San Luis Obispo, as well as in the community of Nipomo. Major 2019 RTP-SCS proposed road widening projects include widening the shoulders to 8-feet on State Route 1 in the community of Nipomo from Willow Road to the Santa Barbara County line, and widening northbound State Route 1 in the City of San Luis Obispo for a short distance to create a separate right-turn lane and bike lane.

Road extensions and realignments would be located in the City of Atascadero (Vine Street realignment with Theater Drive) and on U.S. 101 near Pismo Beach (truck climbing lane extension). Interchange improvements would be located in the cities of Arroyo Grande (U.S. 101 at Brisco Road and Grand Avenue; U.S. 101 at Traffic Way), Atascadero (U.S. 101 at Del Rio Road), and Paso Robles (U.S. 101/State Route 46 roundabouts), and in the unincorporated communities of Avila Beach (U.S. 101 at Avila Beach Drive), Nipomo (U.S. 101 at State Route 166/ Thompson Avenue), San Miguel (U.S. 101 at Wellsona Road), Shandon (State Route 46 East Wye segment), and Templeton (U.S. 101 at Main Street).

Public Transportation Projects

Public transportation projects are listed in 2019 RTP Chapter 11, which is included in Volume II, Documents and Technical Appendices, of this EIR. The primary focus of the transit program is to provide reasonable and accessible region-wide public transit services to meet the mobility needs of all residents for access to essential services.

To achieve this, the 2019 RTP seeks to provide funding to regional fixed-route transit services that connect major and minor population centers and establish and/or maintain community transit services of a type and level deemed appropriate to meet identified transit needs of each city and major unincorporated community in the region.

Several transit systems in the county have identified projects to increase the number of transit vehicles and/or add or improve transit center or bus stop facilities. Public transportation projects identified in the 2019 RTP include implementation of new bus maintenance facility, transit/transfer centers in the downtown San Luis Obispo and increasing services and ridership by 2% for RTA, 1.7% for San Luis Obispo Transit, and 2.5% for the Runabout system.

Active Transportation (Bicycle and Pedestrian Projects)

Active Transportation projects are listed in 2019 RTP Chapter 10, which is included in Volume II, Technical Appendices, of this EIR. The primary focus of the Active Transportation chapter is to provide a comprehensive strategy to develop and maintain a safe and efficient pedestrian and regional bikeway system that promotes walking and bicycling as a means to decrease auto-dependency, air and noise pollution, and traffic congestion. It also aims to support facilities for pedestrians that promote walking as a healthy option and a viable transportation mode and a critical connection between transportation modes.

Providing a safe, convenient, and conducive environment for pedestrians promotes walking as a transportation mode in itself and provides connections between other modes. The Active Transportation chapter incorporates adopted local bike plans of the County and cities. The

RTP concentrates on providing regional bikeway connections and eliminating gaps in the regional bikeway system, focusing on key regional corridors and needed gap closures between existing segments constructed over the past several years. The Active Transportation Chapter includes a long list fundable projects, including: of Class I's, IV's, and Multi-use trails; Complete Streets, Class II's & Livability improvements; and safe routes to schools.

Rail, Aviation, Freight, and Harbor

Rail, Aviation, Freight, and Harbor expectations are listed in 2019 RTP Chapter 12, which is included in Volume II, Technical Appendices, of this EIR. The primary focus of this chapter to facilitate and support safe, commercially feasible, economically viable, and efficient movement of passengers and goods throughout the region, with minimal adverse impacts, and to integrate each system with all other modes of transportation. The program supports safe, commercially feasible, economically viable, and efficient movement of passengers and goods throughout the region, with minimal adverse impact on the population, the infrastructure, or the environment.to provide a comprehensive review of each of these transportation modes, and to support the safe, viable, and efficient movement of passengers and/or freight throughout the region, with minimal adverse impacts on the population, infrastructure, or environment.

Since the 2005, there have been very few changes to the San Luis Obispo County Regional Airport Master Plan and Airport Land Use Plan (ALUP). In fact, the individual land-use plans for the three county airports are dated. The San Luis Obispo Regional Airport's Plan was initially adopted in December 1973 and last updated in May 2005. Paso Robles Municipal Airport's Master Plan was adopted in 2004 and has not yet been updated; and its Land Use Plan, initially adopted in 1977, was amended in 2007. The Oceano County Airport's Plan, initially adopted in May 1976, was amended in May 2007.

2.5 Project Approvals

The following public agencies would need to review and verify the assumptions inherent in the 2019 RTP before prior to implementation of specific projects:

- California Department of Transportation (Caltrans)
- California Transportation Commission (CTC)
- California Coastal Commission (CCC)
- San Luis Obispo Council of Governments (SLOCOG)
- San Luis Obispo Air Pollution Control District (APCD)
- San Luis Obispo Regional Transit Authority (RTA)
- The cities of Arroyo Grande, Atascadero, Grover Beach, Morro Bay, Paso Robles, Pismo Beach, and San Luis Obispo and the County of San Luis Obispo

As future transportation system improvement projects identified in the 2019 RTP are planned and designed, site-specific environmental review will be conducted by the agencies responsible for implementing such projects. The relationship of this EIR to future environmental review of individual transportation projects is further discussed in Chapter 1.0, Introduction. Caltrans is a responsible Agency for all projects planned within its rights-of-way. Any public agencies or private developers contemplating work within a Caltrans right-of-way are required to obtain an approved encroachment permit from Caltrans prior to beginning that work, as well as any encroachment permits required by local agencies for work in their respective jurisdictions

3.0 ENVIRONMENTAL SETTING AND IMPACT ANALYSIS

The following is an introduction to the environmental analysis of the project-specific and cumulative impacts resulting from implementation of the proposed 2019 RTP. This introduction describes the general assumptions used in the analysis. The reader is referred to the individual technical sections of the environmental impact report (EIR) (**Sections 3.1** through **3.15**) regarding the specific assumptions and methodologies used in the analysis for that particular technical subject. These sections contain a discussion of the possible environmental effects of the proposed 2019 RTP for the specific issue areas that were identified as having the potential to experience significant impacts. "Significant effect" is defined by the State CEQA Guidelines Section 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."

3.0.1 Baseline Environmental Conditions and Assumptions

State CEQA Guidelines Section 15125(a) requires that an EIR include a description of the physical environmental conditions in the vicinity of a project, as they exist at the time the Notice of Preparation (NOP) is published. The CEQA Guidelines also specify that this description of the physical environmental conditions should serve as the baseline physical conditions by which a lead agency determines whether the impacts of a project are considered significant.

Much of the environmental setting conditions of San Luis Obispo County are described in the 2019 RTP and the 2019 RTP Appendices, incorporated in this EIR by reference. As appropriate, the individual analysis sections of the EIR (see **Sections 3.1** through **3.15**) identify 2019 RTP chapters where the environmental setting is described. In general, these EIR sections describe the setting conditions of San Luis Obispo County as they existed when the NOP for the project was released on January 9, 2018. In addition, the DEIR also includes a summary of the regulatory setting in place at the time the NOP was released, per CEQA requirements. Although not required, SLOCOG staff has again updated the regulatory setting, to the extent possible, in order to reflect the most current regulatory conditions.

3.0.2 Organization of EIR

The individual technical sections of the EIR follow the format described below.

Existing Setting

This subsection provides a reference for the physical setting conditions associated with the technical area of discussion, consistent with State CEQA Guidelines Section 15125. The Introduction & Setting, Chapter 2 of the 2019 RTP, which is included in **Volume II, Technical Appendices,** of this EIR contains a review of the existing setting conditions and current setting in San Luis Obispo County.

Regulatory Framework

This subsection consists of the identification of applicable federal, state, regional, and local plans, policies, laws, and regulations that apply to the technical area of discussion.

Impacts and Mitigation Measures

The Impacts and Mitigation Measures subsection identifies direct and indirect environmental effects associated with implementation of the proposed 2019 RTP. Standards of significance are identified and utilized to determine whether identified environmental effects are considered significant. Significance thresholds are those criteria adopted by SLOCOG or other agencies, which are universally recognized, or are developed specifically for this analysis to determine whether potential effects are significant. Each environmental impact analysis is identified numerically (e.g., **Impact AQ-1, Short-Term Construction Increases in Local Air Pollution**) and is supported by substantial evidence included in the discussion.

The next subsection describes each impact of the proposed project, mitigation measures for significant impacts, and the level of significance after mitigation. Each effect under consideration for an issue area is separately listed in bold text, 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 State CEQA Guidelines Section 15093.

- 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 State CEQA Guidelines Section 15091.

- Class III – Less than 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.

Following each environmental effect discussion is a listing of recommended 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 as a residual effect. The impact analysis concludes with a listing of specific RTP projects that could contribute to one or more of the general impacts described.

3.0.3 CUMULATIVE SETTING, IMPACTS, AND MITIGATION MEASURES

Chapter 5.0, Cumulative Impacts, provides an analysis of the proposed 2019 RTP's contribution to cumulative impacts to the environment. The State CEQA Guidelines also require the analysis of the cumulative effects of a project in combination with other foreseeable development in the area. Section 15130 of the State CEQA Guidelines prescribes **two methods for analyzing cumulative impacts**:

(1) use of a list of past, present, and reasonably anticipated future projects producing related or cumulative impacts; or
(2) use of a summary of projections contained in an adopted general plan or related planning document.

However, this document is a *Program EIR* that analyzes the effects of cumulative buildout of the 2019 RTP. The RTP considers the past, present, and future projects described in method 1 above and proposes a range of specific projects designed to meet current and projected future needs. The project also constitutes the cumulative scenario described in method 2. Therefore, the cumulative effects of all circulation system improvements in the county are included in the analysis of the project's impacts. The analysis of project impacts contained in this first-tier environmental review document will form the basis for the cumulative analysis contained in any subsequent environmental documentation for specific projects proposed under the 2019 RTP.

The State CEQA Guidelines Section 15145 notes: "If, after thorough investigation, a Lead Agency finds that a particular impact is too speculative for evaluation, the agency should note its conclusion and terminate discussion of the impact." Several of the projects contained in the 2019 RTP do not propose a specific development project on a specific site, but rather identify the need for future undefined projects or further studies for projects for which a site or sites have not been specified. An evaluation of the site-specific impacts of such projects would be speculative, as neither the existing nor the post-project conditions of the sites can be assessed.

3.0.4 EFFECTS FOUND TO NOT BE SIGNIFICANT (NO IMPACT)

CEQA Guidelines Section 15128 requires that an EIR indicate why potentially significant impacts were determined not to be significant and therefore were not analyzed or discussed in detail. The following issues were determined not to be significant and therefore may not include as much detail in the 2019 RTP EIR as other potentially significant impacts.

- Conflict with or obstruct the implementation of the applicable Air Quality Management Plan.
- Result in the destruction of any unique geological feature.
- Result in any development in areas where soils are incapable of adequately supporting the use of septic tanks or alternative wastewater disposal systems where sewers are not available for the disposal of wastewater.
- Result in development in an area which has been identified as a native wildlife nursery.
- Result in the loss of availability of a known mineral resource that would be of value to the region and the residents of the state.
- Result in an increase in the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facilities would occur or be accelerated.
- Change air traffic patterns, resulting in substantial safety risks.
- Conflict with adopted policies, plans, or programs supporting alternative transportation.
- Result in the construction of new water or wastewater treatment facilities (or the expansion of existing facilities) that could cause significant environmental effects.
- Require new or expanded entitlements to water supply resources.
- Result in a determination by the wastewater treatment provider which serves (or may serve) the project sites that it would not have adequate capacity to serve the project's anticipated demand in addition to the provider's existing commitments.
- Fail to comply with federal, state, and local statutes and regulations related to solid waste.

3.0.5 INFORMATION UTILIZED IN THIS EIR

This EIR utilizes technical information and analyses from previously prepared EIRs and other documents that are relevant to the consideration of environmental effects of the proposed 2019 RTP, which is supported by the State CEQA Guidelines (see Sections 15148 and 15150). These documents are available for review at the following address:

San Luis Obispo Council of Governments (SLOCOG)
1114 Marsh Street
San Luis Obispo, CA 93401
Phone: (805) 781-4219
Fax: (805) 781-5714

3.1 AESTHETICS/VISUAL RESOURCES

This section of the EIR describes the existing aesthetics/visual resources in San Luis Obispo County.

3.1.1 Existing Setting

The county of San Luis Obispo is characterized by a diversity of visual settings ranging from natural landscapes such as rolling hills and the Pacific Ocean coastline to built environments such as residential and agricultural areas. The county is defined topographically by the Santa Lucia Mountain Range and the Irish Hills, which traverse the county in a northwest/southeast direction. The valleys between are punctuated by a chain of volcanic morros. Coastal areas of the county offer views of the Pacific Ocean to the west and mountain ranges to the east. Urban development in the county is clustered in coastal areas as well as along US 101. Throughout the county, varied topography and relatively intact native vegetation are "signature" backdrops to human activities such as vineyards and other agricultural lands, rural developments, and city centers. Significant visual features in the county include easily viewed scenes that are valued for their contribution to the character or quality of San Luis Obispo. These features are also defined by the opportunities that people have to enjoy them from public viewpoints, specialized viewing areas, and scenic roads and highways. Significant visual features of the county are described below.

Scenic Landmarks and Views

Significant visual features in the county include steep mountain ranges, rugged shorelines, and dramatic volcanic peaks. Some outstanding features, such as Hollister Peak and coastal views, are so identifiable that they have an iconic status as landmarks. These icons of the landscape may be miles long but only visible to the traveling public for a few seconds. Or, like Morro Rock, they may be visible to entire communities.

Scenic Landscapes

Expansive features such as rolling hills and low ridgelines, open meadows, riparian corridors, wetlands, and forested areas provide valued scenic landscapes. There are several types of scenic landscapes:

Scenic Landscape Regions have signature landscapes that are distinctly different due to combinations of topography, vegetation, and land use (such as agriculture). County examples include the steep grassy hills of Shandon and the wooded hills near Templeton. The individual scenic landscapes associated with these areas provide a sense of place and are valued by both residents and visitors.

Coastal Visual Resources have high value and are protected by the California Coastal Act through the County's Local Coastal Program. County examples include coves, beaches,

headlands, terraces, and open rangelands, including coastal prairie grasslands, oak savannas, pine forest meadows, and grassland-covered upland slopes. Specifically, the Hearst Ranch, the Cambria Pine Forest, and the Harmony Coast offer coastal scenes unique to the area.

Community Separators maintain rural identity between communities and distinguish between communities' identities. In San Luis Obispo County, community separators are evident by the non-urbanized, undeveloped areas between communities often visible along roads and highways.

Scenic Corridors are visible from popular or well-traveled roads or highways, where visual resources are particularly sensitive to impairment by inappropriately designed development. State Route (SR) 1 is a designated National Scenic Byway and is an officially designated State Scenic Route from the San Luis Obispo city limits to the Monterey county line. Several routes in the county may be eligible for State Scenic Route designation, including:

Figure 3.1-1: County Routes Potentially Eligible for State Scenic Route Designation

County Routes Potentially Eligible for State Scenic Route Designation	
Adelaida Road	Highway 101
Avila Beach Drive	Huasna Road from Lopez Drive
Chimney Rock Road	Nacimiento Lake Drive/Interlake Road from Paso Robles to Monterey County
Cypress Mountain Drive from Santa Rosa Creek Road to Chimney Rock Road	Orcutt Road from the San Luis Obispo City Limits to Lopez Drive
Elkhorn Road/Elkhorn Grade Road in the Carrizo Plain	Palo Prieta Cholame Road/Bitterwater Road/Soda Lake Road from Cholame to the California Valley
Foothill Road from San Luis Obispo city limits to Los Osos Valley Road	Pecho Valley Road from Rodman Drive through Montana de Oro State Park
Hi Mountain Road	Pozo Road between Hi Mountain Road and Highway 58
Highway 41 between Morro Bay and Atascadero	Prefumo Canyon Road/See Canyon Road
Highway 46 East	Price Canyon Road
Highway 46 West	Santa Rosa Creek Road
Highway 58 from the Santa Margarita urban reserve line to the Kern County line	South Bay Boulevard from Santa Ysabel Avenue to Highway 1
Lopez Drive from Huasna Road to Lopez Lake Recreation Area	Highway 227 from Price Canyon Road to Arroyo Grande City Limits

Source: SLO County 2010a.

Although not formally designated as scenic highways, expansive views are available from various points along these routes. Regardless of designation, nearly all state highways in the

county can be characterized as traversing scenic areas, whether in urban centers or crossing rural landscapes.

Built Environments

Built environments create a sense of place that contributes to the local identity of San Luis Obispo County. The visual character of the county is defined by a historical pattern of rural development and agriculture that is subordinate to the natural landscape.

Light and Glare

Glare can occur from sunlight reflecting from buildings during the day, and light and glare can occur due to both stationary and mobile sources at night. Streetlights, sign illumination, lighting associated with structures, and landscape lighting are all examples of stationary sources of nighttime lighting. The principal mobile source of nighttime lighting and glare is due to vehicle headlights. Ambient light can be heightened with low clouds or fog at night, due to increases in the amount of reflective glare. In San Luis Obispo County, incorporated cities inherently may have more light and glare due to more clustered development than rural county areas that have large areas with little or no development.

3.1.2 Regulatory Setting

Federal

Federal Highway Administration (FHWA) – National Scenic Byways Program

The FHWA National Scenic Byways Program designates selected highways as "All American Road" (a roadway that is a destination unto itself) or "National Scenic Byway or All American Highway" (a roadway that possesses outstanding qualities that exemplify regional characteristics).

United States Bureau of Land Management (BLM) – Scenic Areas

The BLM designates some of its holdings as Scenic Areas and some roadways in remote areas as Back Country Byways.

United States Forest Service (USFS) – National Scenic Byways Program

The USFS also has a National Scenic Byways Program, independent from the BLM program, to indicate roadways of scenic importance that pass through national forests.

Local

The general plans and zoning ordinances of the cities within the county regulate design and the built environment within those communities. San Luis Obispo County's General Plan and Zoning Ordinance provide the same function within unincorporated areas. In all cases, the general plans and zoning typically prescribe visual resource policies and in some cases, require development review of projects. In general, little direction is provided regarding the design of roadways, which are typically subject to adopted Caltrans or local engineering

standards related to safety and capacity, rather than aesthetics. Roadway landscaping and lighting are generally reviewed when roadways are part of larger land use development proposals.

3.1.3 Impacts and Mitigation Measures

Standards of Significance

An aesthetic or visual resources impact is considered significant if implementation of the project would result in any of the following (based on State CEQA Guidelines Appendix G):

Have a substantial adverse effect on a scenic vista.

Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway.

Substantially degrade the existing visual character or quality of the site and its surroundings.

Create a new source of substantial light or glare which would adversely affect day or nighttime views in the area.

Methodology

The analysis herein is focused on the potential aesthetics/visual resources impacts associated with implementation of the 2019 RTP. It is based on a review of existing data including existing literature, County policies, programs, regulations and other various components, and publicly available documents, including previous EIRs prepared for projects within the county. The assessment of aesthetic impacts involves qualitative analysis that is inherently subjective in nature. Different viewers react to viewsheds and aesthetic conditions differently. This evaluation measures the existing visual resource against the proposed action, analyzing the nature of the anticipated change. Further, the analysis recognizes the programmatic nature of the RTP; therefore, it focuses on the potential implications of the proposed policies of the RTP and not on the individual project-level effects of specific projects. The reader is directed to **Section 5.0, Cumulative Impacts,** of this EIR for analysis of cumulative impacts.

Impacts and Mitigation Measures

This section describes generalized aesthetics/visual resources impacts associated with implementation of the projects listed in the RTP.

Scenic Vistas/Resources

Impact AES-1: Implementation of some of the RTP roadway projects would likely significantly impact public views along designated scenic corridors or highways considered to

have high scenic qualities. This is considered a **Class II, significant but mitigable**, impact.

Construction of individual RTP project improvements along designated scenic corridors could create potentially significant, but short-term, visual impacts. These impacts would include blockage of views by construction equipment, staging areas and temporary signage, and exposure of slopes and removal of vegetation.

With regard to long-term aesthetic impacts, implementation of the RTP projects would, in many cases, result in modifications to existing transportation facilities within existing highway, roadway, or railroad rights-of-way, or on existing airport lands. For most of these types of projects, aesthetic impacts are generally considered adverse but less than significant because they represent further intensification of an existing man-made setting rather than the complete loss of a pristine, natural setting. For such projects, **potentially significant** adverse aesthetic impacts could occur. Typical impacts may be the result of the modification or removal of existing vegetation, the introduction of more massive road structures, or the introduction of street lighting that is out of scale with the area. Such projects would degrade the existing visual condition of the area in which they would occur.

2019 RTP Goals, Policies, and/or Strategies that Serve to Reduce Potential Impacts
This EIR incorporates the 2019 RTP's goals, policy objectives, and action strategies as listed in 2019 RTP Chapter 3 which is included in **Volume II, Technical Appendices**. Included action strategies serve to: *Integrate environmental considerations in all stages of planning and implementation, preserve aesthetic resources, promote environmental enhancements, and protect natural and sensitive resources, preserve and protect natural and sensitive resources. Establish, maintain, and improve transportation systems in a manner that avoids or minimizes significant negative impacts to the environment. Preserve aesthetic resources and promote environmental enhancements with all transportation projects. Maintain and enhance quality aesthetic experiences along transportation corridors and surrounding landscapes.*

In addition, at the time of specific project-level environmental review, the lead agency shall ensure compliance with the following mitigation measures to reduce impacts to a less than significant level.

<u>Mitigation Measures</u>

MM AES-1(a): The lead agency shall ensure that recontouring provides a smooth and gradual transition between modified landforms and existing grade where a particular improvement affects adjacent landforms.

MM AES-1(b): The lead agency shall ensure that associated landscape materials enhance landform variation, provide erosion control, and blend with the natural setting. This requirement can be accomplished through the placement of

conditions on the project by the lead agency during individual environmental review. To ensure compliance with approved landscape plans, the implementing agency shall provide a monetary performance security equal to the value of the landscaping/irrigation installation.

MM AES-1(c): The lead agency shall ensure that a project in a scenic view corridor will have the minimum possible impact, consistent with project goals, upon foliage, existing landscape architecture, and natural scenic views. This requirement shall be accomplished through the placement of conditions on the project by the lead agency during the project-specific environmental review. The lead agency shall ensure that specific design considerations to achieve this mitigation are enacted at each stage of design.

MM AES-1(d): The lead agency shall ensure that potential noise impacts arising from increased traffic volumes associated with adjacent land development shall be preferentially mitigated through the use of setbacks and the acoustical design of adjacent structures. The use of sound walls, or any other architectural features that could block views from the scenic highways or other view corridors, shall be discouraged to the extent possible. Where use of sound walls is found to be necessary, walls shall incorporate offsets, accents, and landscaping to prevent visual monotony, as described in **mitigation measure N-2.**

Compliance with the above mitigation measures would ensure that impacts affecting public views along designated scenic corridors or highways considered to have high scenic qualities would be reduced to a **Class III, less than significant** level.

Visual Character/Lighting

Impact AES-2: Implementation of RTP roadway projects could transform the county's semi-rural/rural areas to a more suburban/urban condition, through the addition of lighting and other urban features. This is considered **Class I, significant and unavoidable**, impact.

Some of the RTP roadway projects could introduce visual features that would alter the existing rural character of the area in which they would occur. In addition, road widenings would change the character of a number of rural country roads to that of a more suburbanized community by increasing pavement and potentially removing roadside native plant species, including oak trees. Ancillary facilities constructed along new or existing roads (such as lighting, bus shelters, and signs) would further contribute to the trend toward greater visual suburbanization.

The visual effect of roadway projects would be greatest in the more rural areas of the county. Projects with particularly high potential to alter the rural character of the county include the

widenings of portions of Routes 1, 41, 46, and 101 and several arterial widenings, including Route 227 outside the City of San Luis Obispo and Airport Road in the City of Paso Robles. This would be considered a **potentially significant** impact. Projects that involve implementation of signage could also result in deterioration of the visual environment and/or block views

Projects that involve realignments, extensions, or additions of railroad track facilities could also degrade the visual environment. The overall visual effect of such projects, whether or not they are in designated scenic areas, would contribute to an incremental transformation in visual character from rural to more urban or suburban. This is considered a **potentially significant** impact.

State CEQA Guidelines Section 15145 notes that "if, after thorough investigation, a lead agency finds that a particular impact is too speculative for evaluation, the agency should note its conclusion and terminate discussion of the impact." An evaluation of the site-specific impacts of many of these types of projects for which sites have not been defined (including several park-and-ride lot projects) would be speculative, as neither the existing nor the post-project conditions of the sites can be assessed. Nevertheless, these projects would be required to undergo separate project-level environmental review pursuant to CEQA when site plans are defined, prior to project implementation.

2019 RTP Goals, Policies, and/or Strategies that Serve to Reduce Potential Impacts

This EIR incorporates the 2019 RTP's goals, policy objectives, and action strategies as listed in 2019 RTP Chapter 3 which is included in **Volume II, Technical Appendices**. Included action strategies serve to reduce project impacts related to visual character and lighting as identified under **Impact AES-1** would also reduce project impacts related to visual character and lighting.

In addition, at the time of specific project-level environmental review, the lead agency shall ensure compliance with the following mitigation measures, through placement of conditions of approval on applicable projects, to reduce impacts.

<u>Mitigation Measures</u>

MM AES-2(a): Roadway extensions and widenings shall avoid the removal of existing mature trees and other mature vegetation to the extent feasible. Landscaping designs for the roadway shall be consistent with those of the specific RTP project lead agency.

MM AES-2(b): Lighting shall be designed so as not to spill over onto adjacent properties and shall demonstrate a nonintrusive quality through incorporation of baffles and lens cut-offs to direct lighting downward, while still providing light for safety and/or security.

MM AES-2(c): All facilities and landscaping in rural areas shall incorporate features complementary of the natural surroundings, including, but not limited to, earth-tone colors, controlled lighting, and natural materials.

Implementation of the above mitigation measures would reduce project-specific impacts to the extent feasible. Mitigation measures **MM AES-1(a)** to **AES-1(d)** would also incrementally reduce potential impacts. Nevertheless, the alteration of the area's current semi-rural/rural character to a more suburban/urban environment is considered a **Class I, significant and unavoidable** impact.

3.2 AIR QUALITY AND HEALTH IMPACTS/RISKS

This section examines the climatic influences that affect regional and local air quality in San Luis Obispo County, as well as current data on measured contaminant levels and the regulatory framework that is intended to improve ambient air quality. This section is primarily based on information from the County's General Plan, including the 2010 Conservation and Open Space Element (SLO County 2010a), prior RTP EIRs, as well as San Luis Obispo Air Pollution Control District's Clean Air Plan (SLOAPCD 2001), as well as consultations with Air District staff.

3.2.1 Existing Setting

The primary factors defining air quality in San Luis Obispo County are the prevailing climatic conditions; the topographic and geographic features of the region; the type, quantity, and location of pollutant emissions; and odors.

Climatic Conditions and Regional Features

San Luis Obispo County covers an area of about 3,300 square miles along the coast of central California. For geography, climate, and meteorology, the county can be divided into three general regions: Coastal Plateau, Upper Salinas River Valley, and East County Plain. The Coastal Plateau is immediately inland from the Pacific Ocean and is typically 5 to 10 miles wide. It ranges in elevation from sea level to about 500 feet above sea level and is bounded on the northeast by the Santa Lucia Mountain Range. The Santa Lucia Range rises to roughly 3,000 feet elevation and aligns parallel to the coast almost the entire length of the county. The Upper Salinas River Valley lies inland from the Santa Lucia Range in the northern portion of the county. The East County Plain lays farther inland along the eastern flank of the county and includes about one-third of the county's area.

About 75 percent of the county's population and a corresponding portion of the commercial and industrial facilities are located within the Coastal Plateau. Because of higher population density and closer spacing of urban areas, emissions of air pollutants per unit area are generally higher in this region than in other regions of the county. The Upper Salinas River Valley, located in the northern one-third of the county, houses roughly 25 percent of the county's population. Historically, this region has experienced the highest ozone and particulate levels in San Luis Obispo County. Transport of ozone precursors from the Coastal Plateau and from the San Joaquin Valley may contribute to this condition. The East County Plain is the largest region by land area; however, less than 1 percent of the county population resides there. Dry land farming and unpaved roads in this region contribute to county totals for particulate emissions, but these emissions rarely affect other regions of the county.

San Luis Obispo County is part of the South Central Coast Air Basin (SCCAB), which also includes Santa Barbara and Ventura counties. The climate of the county is characterized as Mediterranean, with warm, dry summers and cooler, relatively damp winters. Along the coast, mild temperatures prevail most of the year due to the moderating influence of the

Pacific Ocean. The effects of the Pacific Ocean are diminished inland by major intervening terrain features such as the coastal Santa Lucia Mountain Range.

Airflow around the county plays an important role in the movement and dispersion of pollutants. The speed and direction of local winds are controlled by the location and strength of the Pacific high-pressure system and other global weather patterns, topographical factors, and circulation patterns that result from temperature differences between the land and the sea.

During spring and early summer, when the Pacific High attains its greatest strength, the onshore winds pass over the cool water of the ocean, and fog and low clouds often form in the shallow marine air layer along the coast. Surface heating in the interior valleys partially dissipates this marine layer as it moves inland, although the marine layer influence is still observed inland toward the center of the county.

In the fall, onshore surface winds decline and the marine layer grows shallow, allowing an occasional reversal to a weak offshore flow. This offshore flow, along with the diurnal alteration of land-sea breeze circulation, can sometimes produce a "sloshing" effect. Under these conditions, pollutants may accumulate over the ocean for a period of one or more days and are subsequently carried back onshore with the return of the sea breeze. Strong inversions can form at this time, trapping pollutants near the surface.

This effect is intensified when the Pacific High weakens or moves inland to the east and may produce a Santa Ana condition in which air, often pollutant-laden, is transported into the county from the east and southeast. This condition can occur over a period of several days until the high-pressure system returns to its normal location, breaking the pattern. The breakup of this condition may result in relatively stagnant conditions and a buildup of pollutants offshore. The onset of the typical daytime sea breeze can bring these pollutants back onshore, where they combine with local emissions to cause high pollutant concentrations. Not all occurrences of the post Santa Ana condition lead to high ambient pollutant levels, but the pattern does play an important role in the air pollution meteorology of the county.

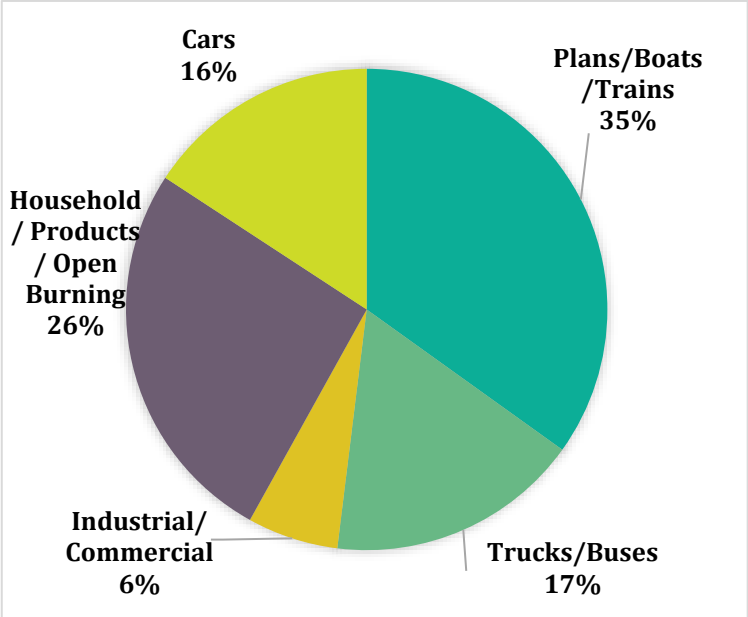
Wintertime radiation inversions, which result from loss of surface heat to a clear, dark night sky, can severely limit vertical mixing of air pollutants emitted near the ground. In combination with smoke from open outdoor burning and the use of wood-fired stoves or fireplaces for residential heating, low wintertime radiation inversions can be a primary contributor to higher levels of particulate matter that have been measured in the Upper Salinas River Valley area. Low inversions and burning combine to leave a smoky haze over some North County communities throughout much of the fall and winter.

Pollutants

Criteria Pollutants, Toxics, and Health Effects

In years past, air quality in the county has exceeded established standards for lead, carbon monoxide, sulfur dioxide, ozone, and particulate matter (PM). Violations of the state standard for particulate matter (PM_{10}) still occur several times a year. In general, the PM_{10} and $PM_{2.5}$ levels measured in the county result from human and natural sources and processes within and closely adjoining the county. Reducing particulate matter air pollution is one of the San Luis Obispo County Air Pollution Control District's (SLOAPCD) highest public health priorities. Exposure to particulate pollution is linked to increased frequency and severity of asthma attacks, pneumonia and bronchitis, and even premature death in people with pre-existing cardiac or respiratory disease.

FIGURE 3.2-1
AIR POLLUTION SOURCES IN SLO COUNTY



Source: California Air Resources Board 2016 SIP Emission Projection Data

On a regional basis, ozone is the pollutant of greatest concern in the county, particularly within the Coastal Plateau. Ozone located in the upper atmosphere acts in a beneficial manner by shielding the earth from harmful ultraviolet radiation that is emitted by the sun. However, ozone located in the lower atmosphere is a major health and environmental concern. Meteorology and terrain play a major role in ozone formation. Generally, low wind speeds or stagnant air coupled with warm temperatures and clear skies provide the optimum conditions for formation. As a result, summer is generally the peak ozone season. Because of the reaction time involved, peak ozone concentrations often occur far downwind of the precursor emissions; therefore, ozone is a regional pollutant that often affects large areas. Ozone is a photochemical oxidant, a substance whose oxygen combines chemically with another substance in the presence of sunlight, and is the primary component of smog. The amount of ozone formed is dependent upon both the ambient concentration of chemical precursors and the intensity and duration of sunlight. Consequently, ambient ozone concentration tends to vary seasonally with the weather. Reactive organic gases (ROG), also called reactive hydrocarbons (RHC), and nitrogen oxides (NOx) are the primary precursors to ozone formation. NOx emissions result primarily from the combustion of fossil fuels; ROG emissions are also generated by fossil fuel combustion and through the evaporation of petroleum products. ROG emissions result primarily from incomplete combustion and the

evaporation of chemical solvents and fuels. NOx are a group of gaseous compounds of nitrogen and oxygen that results from the combustion of fuels. A highly reactive molecule, ozone readily combines with many different components of the atmosphere. Consequently, high levels of ozone tend to exist only while high ROG and NOx levels are present to sustain the ozone formation process. Once these precursors have been depleted, ozone levels rapidly decline. Because these reactions occur on a regional scale, ozone is considered a regional pollutant.
On April 28, 2005, the California Air Resources Board (CARB) approved the nation's most health-protective ozone standard with special consideration for children's health.

Based on monitoring data, San Luis Obispo County has been deemed nonattainment for the 2008 and 2015 ozone standards in east county. All sources combined total 24,186.2 tons. The emission sources of reactive organic gases and oxides of nitrogen are primarily mobile sources from the transportation sector (68 percent).

SLOAPCD annually reports the air quality in the county. SLOAPCD's most recent report 2017 concluded that most populated areas of the county enjoyed good air quality. However, exceptions include the aforementioned ozone levels in east county, as well as elevated particulate on the Nipomo Mesa. Additionally, the County has experienced very high particulate levels during wildfires, such as during an intense wildfire season throughout the State In 2008, when forty-five (45) exceedance days of the state 8-hour standard were recorded at the Carrizo Plains station, a countywide health advisory was issued from May to November 2008 by San Luis Obispo County's Health Officer and Air Pollution Control Officer as a result of smoke impacts from a number of fires throughout the state. More recently, wildfires during 2017 and the Northern California wildfires of 2018 also resulted in high particulate levels and health advisories.

The Nipomo Mesa is located in an area that is impacted by periods of high particulate matter concentrations. Several studies performed by the APCD in the Nipomo Mesa area have shown the source of the elevated particulate matter (PM) pollution to be windblown dust from the open sand areas of the Oceano Dunes State Vehicular Recreation Area (SVRA). The studies provided a comprehensive picture of the characteristics of a typical dust event.

To keep the public informed of periods of deteriorating air quality, the APCD provides a daily air quality forecast for SLO County. SLO County is partitioned into nine air quality forecast zones, and an air quality forecast for a six-day period is provided for each zone. In the Nipomo Mesa area, there are four forecast zones as shown in the map below, and are named CDF, MESA2, NRP and SLO.

The characteristics, sources, and effects of critical air contaminants are provided in **Figure 3.2-1**.

Figure 3.2-1: Year 2016[1] SIP Emission Projection Data

Seasonal Emissions (Tons/Day)	TOG	ROG	CO	NOX	SOX	PM	PM10	PM2.5	NH3
Mobile Sources									
Total On-Road Vehicles	4.68	4.27	33.58	9.35	0.04	0.61	0.6	0.33	0.34
Off-Road Rec Vehicles	0.61	0.54	2.01	0.04	0	0.01	0.01	0	0
Total Mobile Sources Total	8.95	8.03	58.03	25.08	4.8	1.75	1.73	1.4	0.35
Stationary Sources									
Fuel Combustion	0.49	0.23	1.15	1.92	0.59	0.15	0.15	0.14	
Waste Disposal	5.22	0.02	0	0	0	0	0	0	0.11
Cleaning and Surface Coatings	2.05	1.61	-	-	-	0	0	0	-
Petroleum Production and Marketing	1.16	0.64	0.01	0.01	0.08	0	0	0	-
Industrial Processes	1.08	1.08	0.04	0.04	0.02	0.82	0.32	0.09	-
Stationary Sources Total	10.01	3.59	1.21	1.98	0.69	0.98	0.47	0.24	0.11
Areawide Sources									
Misc. Processes	26.3	3.49	10.39	0.76	0.04	17.45	9.65	2.71	2.96
Solvent Evaporation	4.41	4.03	-	-	-	-	-	-	0.33
Areawide Sources Total	30.7	7.53	10.39	0.76	0.04	17.45	9.65	2.71	3.29
ALL SOURCES TOTAL	**49.66**	**19.14**	**69.63**	**27.81**	**5.53**	**20.19**	**11.85**	**4.35**	**3.75**

Notes:

1. The most current estimates are from Almanac Emission Project Data for San Luis Obispo County for 2016.

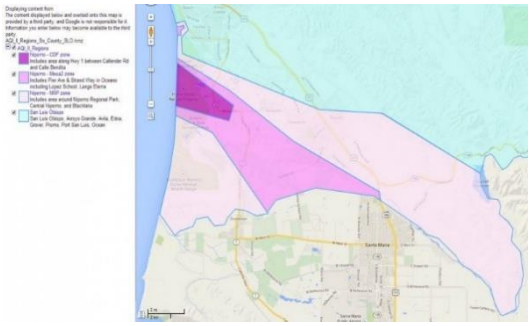
2. All emissions are represented in tons per day.

Source: CARB 2012 Estimated Annual Average Emissions

Current Ambient Air Quality

The District prepares an Ambient Air Monitoring Network Plan every year. This document is an annual examination and evaluation of the network of air pollution monitoring stations in the county. The annual review is required by 40 CFR 58.10 and helps ensure continued consistency with the monitoring objectives defined in federal regulations.

Each report is a directory of existing and proposed monitors in the county network and serves as a progress report on the recommendations and issues raised in earlier network reviews. Reports also address ongoing network design issues. They are available online at http://www.slocleanair.org/airquality/monitoringstations.php.



As highlighted in the 2017 and 2018 reports, the Oso Flaco site was temporarily shut down by the California Department of Parks and Recreation on December 15, 2016. The site was reopened in March 2017.
Click the map below to be linked to an interactive version on Google Maps

San Luis Obispo County has been deemed nonattainment for the state PM_{10} standard. As a result of the county's nonattainment status for PM_{10}, construction mitigation measures are required for all projects involving earthmoving activities regardless of size or duration. In order for a district to be in attainment, the state standards for any criteria pollutant must not be exceeded for three consecutive years.

The 2017 Annual Air Quality Report includes the following relevant figures:

Figure 3.2-2: Ozone design Value Trends, 2008-2017

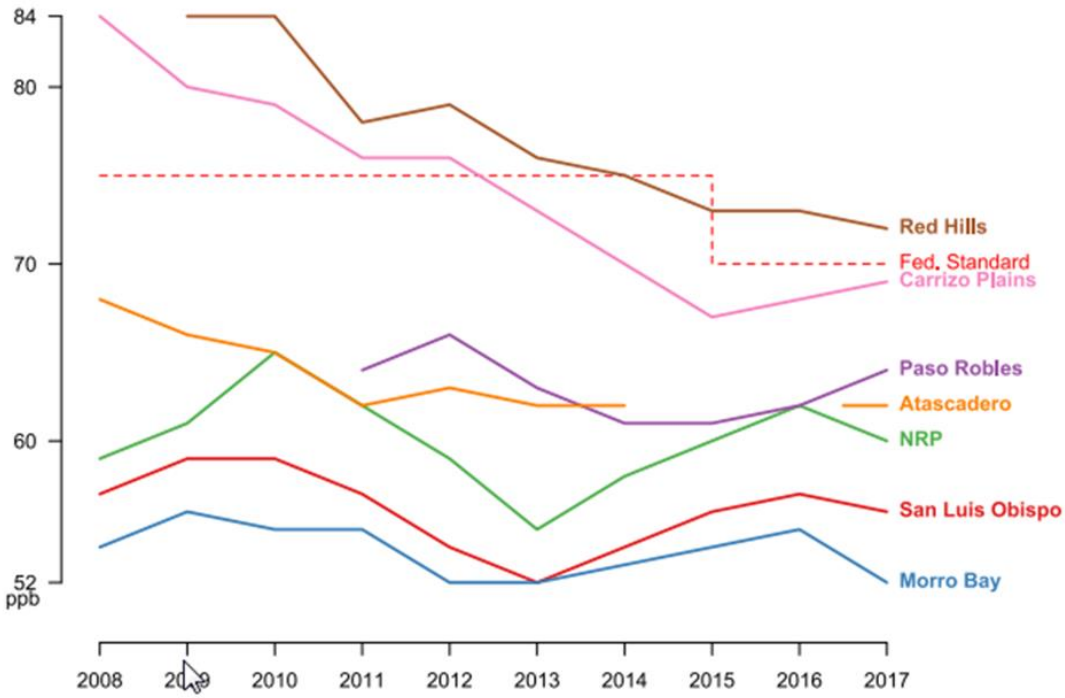


Figure 3.2-3: Exceedances of the California 24-hour PM10 Standard, 2010-2017

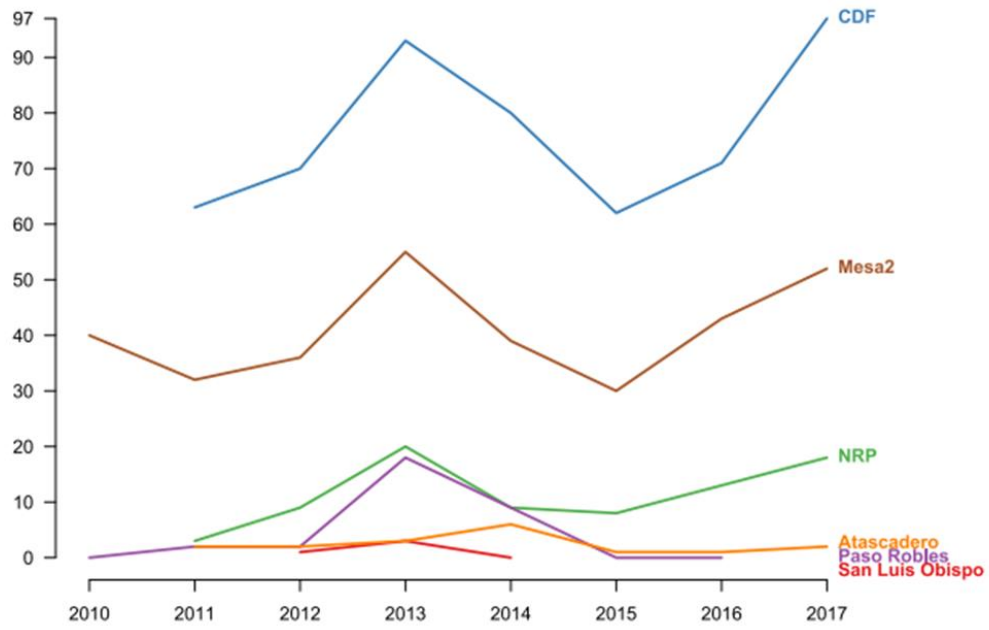
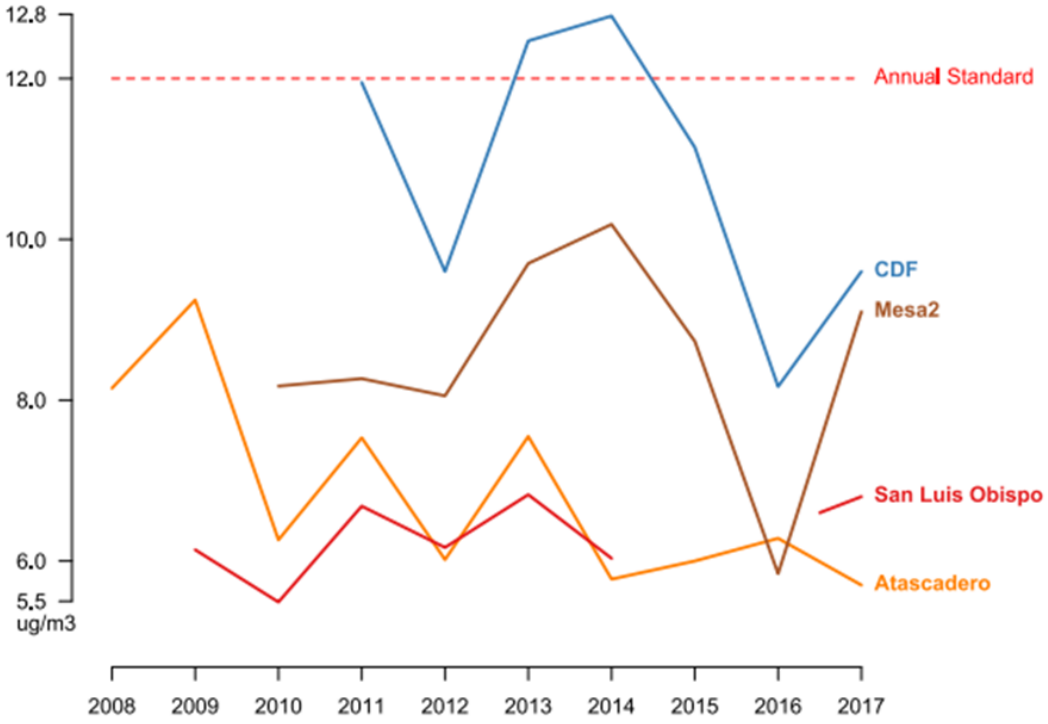


Figure 3.2-4: PM2.5 Annual Averages, 2008-2017



The primary pollutant of concern in the project area is ozone. The basin is in nonattainment for the state ozone 1-hour standard. The basin is also in nonattainment regarding the state standard for particulate matter (PM_{10}). The major sources for PM_{10} in the county are mineral quarries, grading, demolition, agricultural tilling, road dust, and vehicle exhaust. PM_{10} levels in the area are primarily due to grading and motor vehicle emissions.

Attainment Status for Criteria Air Pollutants

An attainment designation for an area signifies that pollutant concentrations did not violate the standard for that pollutant in that area. A nonattainment designation indicates that a pollutant concentration violated the standard at least once, excluding those occasions when a violation was caused by an exceptional event, as defined in the criteria.

> A **standard exceedance** occurs when a measured pollutant concentration exceeds (or in some cases, equals) the applicable standard prescribed by state or federal agencies. It does not necessarily constitute a violation.
>
> A **standard violation** may occur following a single or cumulative series of standard exceedances. Criteria constituting a violation are unique for each pollutant.
>
> A **nonattainment designation** occurs when a state or federal agency formally declares an area in violation of a standard. Typically, ARB performs designations annually. Several years often pass between EPA designations.

Unclassified designations indicate insufficient data is available to determine attainment status. The attainment status of the county is summarized in **Figure 3.2-5** below.

Figure 3.2-5: County Attainment Status Designation

San Luis Obispo County Attainment Status

Pollutant	Averaging Time	California Standards****		Federal Standards****	
		Concentration	Attainment Status	Concentration	Attainment Status
Ozone (O_3)	1 Hour	0.09 ppm (180 µg/m³)	Non-Attainment	–	Non-Attainment Eastern SLO County - Attainment Western SLO County***
	8 Hour	0.070 ppm (137 µg/m³)		0.070 ppm (137 µg/m³)******	
Respirable Particulate Matter (PM10)	24 Hour	50 µg/m³	Non-Attainment	150 µg/m³	Unclassified*/ Attainment
	Annual Arithmetic Mean	20 µg/m³		–	
Fine Particulate Matter (PM2.5)	24 Hour	No State Standard	Attainment	35 µg/m³	Unclassified*/ Attainment
	Annual Arithmetic Mean	12 µg/m³		12.0 µg/m³ *****	
Carbon Monoxide (CO)	8 Hour	9.0 ppm (10 mg/m³)	Attainment	9 ppm (10 mg/m³)	Unclassified*
	1 Hour	20 ppm (23 mg/m³)		35 ppm (40 mg/m³)	
Nitrogen Dioxide (NO_2)	Annual Arithmetic Mean	0.030 ppm (57 µg/m³)	Attainment	0.053 ppm (100 µg/m³)	Unclassified*
	1 Hour	0.18 ppm (330 µg/m³)		100 ppb (196 mg/m³)	
Sulfur Dioxide (SO_2)	Annual Arithmetic Mean	–	Attainment	0.030 ppm (80 µg/m³)	Unclassified*
	24 Hour	0.04 ppm (105 µg/m³)		0.14 ppm (365 µg/m³)	
	3 Hour	–		0.5 ppm (1300 µg/m³)**	
	1 Hour	0.25 ppm (655 µg/m³)		75 ppb (196 mg/m³)	
Lead*	30 Day Average	1.5 µg/m³	Attainment	–	No Attainment Information
	Calendar Quarter	–		1.5 µg/m³	
	Rolling 3-Month Average*	–		0.15 µg/m³	
Visibility Reducing Particles	8 Hour	Extinction coefficient of 0.23 per kilometer – visibility of ten miles or more (0.07-30 miles or more for Lake Tahoe) due to particles when relative humidity is less than 70 percent. Method: Beta Attenuation and Transmittance through Filter Tape.	Attainment	No Federal Standards	
Sulfates	24 Hour	25 µg/m³	Attainment		
Hydrogen Sulfide	1 Hour	0.03 ppm (42 µg/m³)	Attainment		
Vinyl Chloride*	24 Hour	0.01 ppm (26 µg/m³)	No Attainment Information		

* Unclassified (EPA/Federal definition): Any area that cannot be classified on the basis of available information as meeting or not meeting the national primary or secondary ambient air quality standard for that pollutant. ** Secondary Standard

*** San Luis Obispo County has been designated non-attainment east of the -120.4 deg Longitude line, in areas of SLO County that are south of latitude 35.45 degrees, and east of the -120.3 degree Longitude line, in areas of SLO County that are north of latitude 35.45 degrees. Map of non-attainment area is available upon request from the APCD. **** For more information on standards visit:http//ww.arb.ca.gov.research/aaqs/aaqs2.pdf

Attainment (EPA/Federal definition): Any area that meets the national primary or secondary ambient air quality standard for that pollutant. (CA definition): State standard was not exceeded during a three year period. ***** Federal PM2.5 Secondary Standard is 15µg/m³

Non-Attainment (EPA/Federal definition): Any area that does not meet, or contributes to an area that does not meet the national primary or secondary ambient air quality standard for that pollutant. (CA definition): State standard was exceeded at least once during a three year period. ******The 2008 NAAQS for 8hr ozone is 0.075 ppm. The 2015 NAAQS for 8hr ozone is 0.070 ppm. The attainment status shown in this table relates to the 2008 and 2015 NAAQS. SLO County has been designated non-attainment of the 2015 NAAQS. NAAQS is National Ambient Air Quality Standards H:\OUTREACH\AttainmentStatus Revised January 29, 2019

San Luis Obispo Clean Air Plan

State standards for ozone and fine particulate matter (PM_{10}) are currently exceeded in San Luis Obispo County, as shown above in **Figure 3.2-5**. As such, SLOAPCD is required to develop a plan to achieve and maintain the state ozone standard by the earliest practicable date. The county's plan is called the Clean Air Plan, or CAP. The most current CAP was last updated in 2001 and is the third update to the 1991 CAP adopted by the SLOAPCD Board in January 1992.

Analysis of several long-term air quality trends in the county demonstrates that ozone air quality in the coastal and southern areas of the county appears to be improving while air quality in the North County is declining. At the county level, transportation control measures and land use planning strategies play an important role in the implementation of the CAP.

Odors

Although offensive odors rarely cause physical harm, they can be very unpleasant, leading to considerable stress among the public and often generating citizen complaints to local governments and agencies. Facilities commonly known to produce odors include wastewater treatment facilities, chemical manufacturing, painting/coating operations, feed lots/dairies, composting facilities, landfills, and transfer stations. Because offensive odors rarely cause physical harm and no requirements for their control are included in state or federal air quality regulations, SLOAPCD has no rules or standards related to odor emissions, other than its nuisance rule. Any actions related to odors are based on citizen complaints to local governments and SLOAPCD.

3.2.2 Regulatory Framework

Federal

Federal Clean Air Act and Amendments

The early federal legislative response to air quality concerns consisted of the Air Pollution Control Act of 1955, the Clean Air Act of 1963, and the Air Quality Act of 1967. The goal of the Clean Air Act (CAA) of 1970, as stated by Congress in the 1977 CAA Amendments, was to protect and enhance the quality of the nation's air resources. The Clean Air Act Amendments of 1990 are extremely broad. The major titles of the 1990 Amendments address attainment of air quality standards, mobile source emissions, air toxics, acid rain, a new federal permit program, enforcement, and protection of stratospheric ozone. The titles that most substantially affect the air quality analysis of the proposed project are Title I (attainment and maintenance provisions) and Title II (mobile source provisions).

State

Title I of the Clean Air Act Amendments of 1990

The goal of Title I is to attain federal air quality standards for six criteria pollutants: ozone (O_3), carbon monoxide (CO), particulate matter (PM), nitrogen dioxide (NO_2), sulfur dioxide (SO_2), and lead (Pb). A description of these pollutants and associated health effects are summarized in **Figure 3.2-6**. National Ambient Air Quality Standards (NAAQS) for these criteria pollutants are summarized in **Figure 3.2-5**. The 1990 Amendments to the federal Clean Air Act divided the nation into five categories of planning regions, depending on the severity of their pollution, and set new timetables for attaining the air quality standards. The categories range from marginal to extreme. Attainment deadlines are from 3 to 20 years, depending on the category.

Title I also requires each nonattainment area to submit a comprehensive inventory of actual emissions as part of a State Implementation Plan (SIP) revision to demonstrate the means for achieving federal standards by the established deadlines.

Provisions of Section 182 of the 1990 Clean Air Act Amendments relate to ozone nonattainment areas and Sections 186 and 187 relate to carbon monoxide nonattainment areas. These sections emphasize strategies for reducing vehicle miles traveled. Section 182 requires submission of a SIP revision that identifies and adopts specific enforceable transportation control strategies and transportation control measures to offset any growth in emissions from growth in vehicle miles traveled or numbers of vehicle trips in such area to meet statutory requirements for demonstrating periodic emissions reduction requirements. Section 187 makes the same basic requirement applicable to carbon monoxide nonattainment areas. Section 188 sets forth requirements for PM_{10} nonattainment areas.

Figure 3.2-6: Summary of Common Sources and Effects of Criteria Pollutants

Pollutant	Description & Common Sources	Health & Welfare Effects
Carbon Monoxide	· A colorless, odorless gas.	· Headaches, reduced mental alertness, heart attack, cardiovascular diseases, impaired fetal development, death.
	· Common sources include motor vehicle exhaust; indoor sources include kerosene wood-burning stoves.	· Contributes to the formation of smog.
Sulfur Dioxide	· A colorless gas that dissolves in water vapor to form acid, and interacts with other gases and particulates in the air.	· Eye irritation, wheezing, chest tightness, shortness of breath, lung damage.
	· Common sources include coal-fired power plants, petroleum refineries, manufacture of sulfuric acid and smelting of ores containing sulfur.	· Contributes to the formation of acid rain, visibility impairment, plant and water damage, aesthetic damage.
Nitrogen Dioxide	· Reddish brown, highly reactive gas.	· Increased susceptibility to respiratory infections, irritation of the lung and respiratory symptoms (e.g., cough, chest pain, difficulty breathing).
	· Common sources include motor vehicles, electric utilities, and other industrial, commercial, and residential sources that burn fuels.	· Contributes to the formation of smog, acid rain, water quality deterioration, global warming, and visibility impairment.
Ozone	· Gaseous pollutant formed in the atmosphere from the combination of reactive organic gases and oxides of nitrogen in the presences of sunlight.	· Eye and throat irritation, coughing, respiratory tract problems, asthma, lung damage.
	· Common sources include vehicle exhaust.	· Plant and ecosystem damage.
Lead	· Metallic element.	· Anemia, high blood pressure, brain and kidney damage, neurological disorders, cancer, lowered IQ.
	· Common sources include metal refineries, lead smelters, battery manufacturers, iron and steel producers and use of leaded fuels by racing and aircraft industries.	· Affects animal and plants, affects aquatic ecosystems.
Particulate Matter	· Very small particles of dust, soot, or other matter, including tiny droplets of liquids.	· Eye irritation, asthma, bronchitis, lung damage, cancer, heavy metal poisoning, cardiovascular effects.
	· Common sources include diesel engines, power plants, industries, windblown dust, wood stoves.	· Visibility impairment, atmospheric deposition, aesthetic damage, impaired plant photosynthesis.

Source: USEPA 2010a

Title II of the Clean Air Act Amendments of 1990

Title II of the 1990 Amendments, which contains provisions to control emissions from mobile sources, includes the following measures to reduce pollutants from mobile sources: (1) mandatory use of cleaner, reformulated gasoline in those cities with the most severe ozone problem, (2) use of cleaner fuels, such as methanol and natural gas, to meet particulate standards, and (3) requirements on auto manufacturers to reduce tailpipe emissions of hydrocarbons (HC) and oxides of nitrogen. Section 177 of Title II permits California to adopt stricter vehicle emission standards and allows other states to adopt California's stricter standards.

California Clean Air Act

The California Clean Air Act of 1988 (CCAA), amended in 1992, requires all air districts in the state to achieve and maintain state ambient air quality standards for ozone, carbon monoxide, sulfur dioxide, nitrogen dioxide, and particulate matter by the earliest practicable date. California's ambient air quality standards are generally stricter than national standards for the same pollutants. California also has established its own standards for sulfates, hydrogen sulfide, vinyl chloride, and visibility-reducing particles (**Figure 3.2-5**).

Toxic Air Contaminants

Toxic air contaminants (TACs) in California are regulated primarily through the Tanner Air Toxics Act (AB 1807 [Statutes of 1983]) and the Air Toxics Hot Spots Information and Assessment Act of 1987 (AB 2588 [Statutes of 1987]). AB 1807 sets forth a formal procedure for CARB to designate substances as TACs. Research, public participation, and scientific peer review must occur before CARB can designate a substance as a TAC. To date, CARB has identified more than 21 TACs and adopted the USEPA's list of HAPs as TACs. Most recently, diesel PM was added to the CARB list of TACs.

Once a TAC is identified, CARB then adopts an airborne toxics control measure (ATCM) for sources that emit that particular TAC. If there is a safe threshold for a substance at which there is no toxic effect, the control measure must reduce exposure below that threshold. If there is no safe threshold, the measure must incorporate BACT to minimize emissions.

Assembly Bill 2588 (AB 2588) requires that existing facilities that emit toxic substances above a specified level prepare a toxic-emission inventory, prepare a risk assessment if emissions are significant, notify the public of significant risk levels, and prepare and implement risk reduction measures.

Local

San Luis Obispo County Air Pollution Control District

At the local level, the San Luis Obispo County Air Pollution Control District (SLOAPCD) is responsible for establishing and enforcing local air quality rules and regulations that address the requirements of federal and state air quality laws. SLOAPCD's Board consists of 12 members – the Board of Supervisors and one city council representative from each of the seven

incorporated cities. The Board is the decision-making body for SLOAPCD and is responsible for adopting rules, setting policies, and providing direction on important air quality issues affecting the county. SLOAPCD is in process of updating the CEQA thresholds of significance for greenhouse gases to recognize the deficiency in existing thresholds (AB 32 based with 2020 horizon) relative to SB 32 targets, and at the same time SLOAPCD is monitoring developments in other regions as well as evolving policies with CARB.

SLOAPCD staff monitors county air quality, reviews land use projects, develops and enforces rules and regulations, issues permits, and creates long-term Clean Air Plans for the county. The District works with government, industry, businesses, and the public to reduce air pollution from stationary sources, such as power plants, corner gas stations, and local dry cleaners. SLOAPCD also implements programs to promote alternative means of transportation, such as carpooling, telecommuting, and use of clean vehicle technologies.

Strategic Action Plan

SLOAPCD's Strategic Action Plan for 2012-17 ensures that the District's priorities and programs remain properly aligned with its mission, to identify top goals, objectives, and implementation tactics, to ensure resources are best utilized to achieve its mission, and to preserve air quality throughout the county.

The APCD's Strategic Action Plan is intended to provide a roadmap for the challenges to face over the next five years and the strategies needed to meet them. It was developed to ensure that priorities and programs remain properly aligned with its mission, and that resources are used efficiently and effectively to accomplish identified goals while increasing public awareness and participation in their achievement.

San Luis Obispo Clean Air Plan

As part of the CCAA, SLOAPCD is required to develop a plan to achieve and maintain the state ozone standard by the earliest practicable date. The 2001 Clean Air Plan (CAP) outlines SLOAPCD's strategies to reduce ozone precursor emissions from a wide variety of stationary and mobile sources. Analysis of several long-term air quality trends in the county demonstrates that ozone air quality in the coastal and southern areas of the county appears to be improving while air quality in the North County in declining. At the county level, transportation control measures and land use planning strategies play an important role in the implementation of the CAP.

SLOAPCD CEQA Air Quality Handbook

SLOAPCD's CEQA Air Quality Handbook (2012) and clarification memo (2017) discusses land use rules and regulations and procedures for implementing CEQA. Specifically, it provides information on the District's significance thresholds for determining potential air quality impacts from proposed residential and commercial development and provides recommendations on the level of mitigation necessary to reduce those impacts.

Appendix A of the SLOAPCD Handbook outlines the building permit requirements for facilities potentially subject to air district permitting.

SLOAPCD has established four separate categories of evaluation for determining the significance of project impacts. Full disclosure of the potential air pollutant and/or toxic air emissions from a project is needed for these evaluations, as required by the California Environmental Quality Act (CEQA):

1) Comparison of calculated project emissions to SLOAPCD emission thresholds.
2) Consistency with the most recent Clean Air Plan (CAP) for San Luis Obispo County.
3) Comparison of predicted ambient pollutant concentrations resulting from the project to state and federal health standards, when applicable.
4) The evaluation of special conditions which apply to certain projects.

Any proposed development which has the potential to exceed local CEQA construction or operation thresholds for one or more air pollutants (e.g., reactive organic gases, nitrogen oxides, sulfur dioxide, or particulate matter) should be submitted to SLOAPCD for review. This requirement applies to residential projects of greater than 35 homes, retail projects greater than 3,000 square feet, or any project that will include 4 or more acres of grading.

The SLOAPCD evaluation of development projects includes an estimation of air pollution produced during construction of the project (short-term emissions), including diesel emissions and dust, and from new vehicle trips that will result once the development is in operation (long-term emissions). Potential air quality impacts are estimated by performing emission calculations and using computer air modeling tools. The estimated emission levels are compared to the District's CEQA significance thresholds and then mitigation measures are suggested as necessary to minimize potential air quality impacts.

Resource Conservation System

The Framework for Planning includes the following air quality goals as designated in the County's Land Use Element:

Preserve and protect the air quality of the county by seeking to attain and maintain state and federal ambient air quality standards.

Determine, and mitigate where feasible, the potential adverse air quality impacts of new development.

Minimize the generation of air pollutants from projected growth by implementing land use policies and programs that promote and encourage the use of transportation alternatives to the single-passenger vehicle and minimize travel distance and trip generation.

Air Quality Standards and Attainment Status for Criteria Pollutants The State of California and the U.S. Environmental Protection Agency (USEPA) have adopted ambient air quality standards for six common air pollutants of primary public health concern: ozone, particulate matter (PM10 and PM2.5), nitrogen dioxide (NO2), sulfur dioxide (SO2), carbon monoxide (CO), and lead. These are called "criteria pollutants" because the standards establish

permissible airborne pollutant levels based on criteria developed after careful review of all medical and scientific studies of the effects of each pollutant on public health and welfare. Air Quality Standards are used to designate a region as either "attainment" or "non-attainment" for each criteria pollutant.

A non-attainment designation can trigger additional regulations for that region aimed at curbing pollution levels and bringing the region into attainment of the standards. The National Ambient Air Quality Standards (NAAQS or federal standards) are generally less restrictive than California Ambient Air Quality Standards (CAAQS or California Standards). However, the federal standards come with regulatory penalties that the California Standards do not have. For example, federal transportation funds can be withheld as a punitive measure for jurisdictions that do not meet federal standards. For most pollutants, the NAAQS allow a standard to be exceeded a certain number of times each calendar year without resulting in a non-attainment designation. The current SLO County attainment status is provided in **Figure 3.2-5**.

SLO County Resource Summary Report 2018 VII. Air Quality

The County of San Luis Obispo has the authority to protect the health, safety, and welfare of citizens from such environmental hazards as air pollution. The County General Plan acknowledges the relationship between the San Luis Obispo County Air Pollution Control District (APCD) air quality goals and policies and County General Plan policies.

The County's 2018 Resources Summary Report Section VII on Air Quality reports on a number of factors that affected Air Quality and Air Quality Measurements in 2014-2016. Smoke from wildfires can have a temporary adverse affect on air quality. The Cuesta Fire began on August 16, 2015 and eventually burned almost 2,500 acres in the area east of the Cuesta Grade on U.S. 101 and south of Santa Margarita. Smoke from several large wildfires in 2016, have had a significant impact on air quality. In addition, there were several notable air quality monitoring network changes in 2015:

In February, the Atascadero station was relocated from 6005 Lewis Avenue to behind the Colony Park Community Center at 5599 Traffic Way.

In July, a new PM_{10} monitoring station was established within the Oso Flaco area of the Oceano Dunes State Vehicular Recreation Area (ODSVRA). This monitor fulfills the "Control Site Monitor" requirement of San Luis Obispo County APCD District Rule 1001. While owned by the California Department of Parks of Recreation, the monitor is operated by the APCD.

Due to a safety issue, the PM_{10} and $PM_{2.5}$ monitors at the San Luis Obispo station were temporarily shut down from September 2015 through mid-June 2016. This site is run by the California Air Resources Board.

Land Use Ordinances
The Inland and Coastal Zone Land Use Ordinances (Sections 22.10.030 and 23.06.080) establish procedures for the notification of SLOAPCD when a new land use is proposed to include equipment or activities that involve combustion or the storage or use of hydrocarbons or other air contaminants. The procedures apply to any discretionary application filed as defined by Titles 22 and 23 (Permit Applications) except business licenses, as follows:

3.2.3 Impacts and Mitigation

Standards of Significance

An air quality impact is considered significant if implementation of the project would result in any of the following (based on State CEQA Guidelines Appendix G):

Conflict with or obstruct implementation of the applicable air plan.

Violate any air quality standard or contribute substantially to an existing or projected air quality violation.

Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is nonattainment under an applicable federal or state ambient air quality standard (including releasing emissions which exceed quantitative thresholds for ozone precursors).

Expose sensitive receptors to substantial pollutant concentrations.

Create objectionable odors affecting a substantial number of people.

The CEQA Guidelines state that, where available, the significance criteria established by the applicable air quality management or air pollution control district may be used to determine level of significance. SLOAPCD has developed guidelines and thresholds of significance for local plans. Inconsistency with the most recently adopted 2001 Clean Air Plan is considered a significant impact. According to SLOAPCD, the following criteria must be satisfied for a local plan to be determined to be consistent with the CAP and not have a significant air quality impact:

a) The local plan should be consistent with the CAP population and vehicle miles traveled (VMT) assumptions. This is demonstrated if the population growth over the planning period will not exceed the values included in the current CAP. SLOCOG coordinates with APCD in the development of the population and VMT projections.

b) The local plan demonstrates reasonable efforts to implement the transportation control measures (TCMs) included in the CAP that identify cities as implementing agencies.

c) For local plans to have a less than significant impact with respect to potential odors and/or toxic air contaminants, buffer zones should be established around existing and proposed land uses that would emit these air pollutants.

In addition, an air quality resources impact is considered significant if implementation of the 2019 RTP would result in any of the following (based on SLOCOG standards):

a) Conflict with or obstruct implementation of the applicable air quality attainment plan in San Luis Obispo County. This will include assessing whether the RTP accommodates growth forecasts that are consistent with the ozone attainment plan from SLOAPCD and whether the motor vehicle emissions inventory is consistent with the attainment budget for the State Implementation Plan.

b) Violate any air quality standard or contribute to an existing or projected air quality violation in San Luis Obispo County.

c) Result in a cumulatively considerable net increase of any criteria pollutant for which the region is nonattainment under an applicable federal or state ambient air quality standard (including releasing emissions which exceed quantitative thresholds for ozone precursors). The most straightforward means to assess these potential impacts is to evaluate overall mobile source emission trends.

Comparison to Air Quality Standards

State and federal air quality standards are excerpted in **Figure 3.2-5**. A project is considered to have a significant impact if its emissions are predicted to cause or contribute to a violation of any ambient air quality standard.

Special Conditions

Project impacts may also be considered significant if one or more of the following special conditions apply:

- If a project has the potential to emit toxic or hazardous air pollutants, impacts may be considered significant due to increased cancer risk for the affected population, even at a very low level of emissions.

- If a project has the potential to cause an odor or other nuisance problem which could impact a considerable number of people, then it may be considered significant. A project may emit a pollutant in concentrations that would not otherwise be significant except as a nuisance, for example hydrogen sulfide (H_2S).

- If a project is located near a sensitive receptor, such as a school, hospital, or senior center, it may be considered significant even if other criteria do not apply. The health effects of a project's emissions may be more pronounced if they impact a considerable number of children, elderly, or people with existing infirmities.

Methodology

The analysis of air quality issues follows the guidance provided in the SLOAPCD CEQA Air Quality Handbook (2012) and clarification memo (2017) as well as the State CEQA Guidelines. The State CEQA Guidelines state that a project will result in a potentially significant impact if it would violate any ambient air quality standard, contribute substantially to an existing or projected air quality violation, result in a net increase of any criteria pollutant for which the region is in nonattainment, create or contribute to a non-stationary source "hot-spot" (primarily carbon monoxide), expose sensitive receptors to substantial pollutant concentrations, or create objectionable odors that affect a substantial number of people.

SLOAPCD has established four separate categories of evaluation for determining the significance of project impacts: (1) comparison of calculated project emissions to SLOAPCD emission thresholds; (2) consistency with the most recent Clean Air Plan (CAP) for San Luis Obispo County; (3) comparison of predicted ambient pollutant concentrations resulting from the project to state and federal health standards, when applicable; and (4) the existence of special conditions which apply to certain projects.

Consistency with SLOAPCD Clean Air Plan

Projects and programs requiring an analysis of consistency with the CAP include general plan updates and amendments, specific plans, area plans, large residential developments, and large commercial/industrial developments. The consistency analysis must evaluate the following questions:

- Are the population projections used in the plan or project equal to or less than those used in the most recent CAP for the same area?
- Is the rate of increase in vehicle trips and miles traveled less than or equal to the rate of population growth for the same area?
- Have all applicable land use and transportation control measures from the CAP been included in the plan or project to the maximum extent feasible?

If the answer to all of the above questions is yes, then the proposed project or plan is considered to be consistent with the CAP. If the answer to any one of the questions is no, then the emissions reductions projected in the CAP may not be achieved, which could delay or preclude attainment of the state ozone standard. This outcome would be considered inconsistent with the CAP.

Impacts and Mitigation Measures

This section describes generalized air quality impacts associated with implementation of the projects listed in the 2019 RTP.

Short-Term Construction Activities

Impact AQ-1: Many of the capital improvement projects included in the 2019 RTP would involve construction activity that could generate temporary increases in

local air pollution. Construction impacts can be significant, depending upon the project and site-specific conditions, both of which are unknown at this time. Because of their temporary nature, mitigation is can be achieved via standard measures. This impact is considered **Class II, significant but mitigable**.

Three basic sources of short-term emissions would be generated by implementation of the RTP: operation of the construction vehicles (i.e., scrapers, loaders, dump trucks); the creation of fugitive dust during clearing and grading; and the use of asphalt or other oil-based substances during the final construction phases. The quantity of daily emissions, particularly ROG and NOx emissions, generated by construction equipment utilized to build RTP improvements would depend on the nature of the particular RTP project itself, as well as a host of siting, project management, and operational considerations. Staging areas and the number of vehicles used and the hours of operation are just a few of the many considerations.

With regard to air quality, fugitive dust (PM_{10}) emissions would depend on the following factors: the aerial extent of disturbed soils and the length of disturbance time; whether or not existing structures are demolished; whether or not excavation is involved; and whether or not transport of excavated materials off site is necessary. The level of hydrocarbon emissions generated by oil-based substances such as asphalt is dependent on the type and amount of asphalt utilized. Quantifying the air quality impacts from short-term, temporary construction activities of infrastructure improvements identified in the RTP is not possible due to project-level variability and uncertainties related to future individual projects.

Figure 3.2-7 below shows the approximate level of construction activity that would result in a potentially significant impact for each pollutant of concern. In addition, since San Luis Obispo County is in nonattainment for PM_{10}, construction mitigation measures are required for all projects involving earthmoving activities regardless of size or duration.

Figure 3.2-7: Thresholds of Significance for Construction Operations

Pollutant	Threshold [1]		
	Daily	Quarterly (Tier 1)	Quarterly (Tier 2)
ROG + NOx (combined)	137 lbs	2.5 tons	6.3 tons
Diesel Particulate Matter (DPM)	7 lbs	0.13 tons	0.32 tons
Fugitive Particulate Matter (PM_{10}), Dust [2]	–	2.5 tons	
Greenhouse Gases (CO_2, CH4, N20, HFC, CFC, F6S)	Amortized and Combined with Operational Emissions (See Below)		

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

2. Any project with a grading area greater than 4.0 acres of worked area can exceed the 2.5 ton PM_{10} quarterly threshold.

Source: SLOAPCD 2012

Construction projects generally produce nuisance dust emissions; hence, dust mitigation measures are required for all construction activities. The following mitigation measures are consistent with best management practices (BMPs) pursuant to SLOAPCD's recommendations to minimize emissions and reduce the amount of dust that drifts onto adjacent properties. These measures would apply to both tract grading and development of individual lots.

Mitigation Measures

MM AQ-1(a): The lead agency for a particular RTP project that involves construction shall incorporate APCD's standard "Standard Mitigation Measures for Construction Equipment," as follows: The standard construction equipment mitigation measures for reducing nitrogen oxide (NO_x), reactive organic gases (ROG), and diesel particulate matter (DPM) emissions are listed below and in section 2.3.1 of the APCD's 2012 CEQA Handbook. **These measures are applicable to all projects where construction phase emissions exceed APCD thresholds:**

- Maintain all construction equipment in proper tune according to manufacturer's specifications;
- Fuel all off-road and portable diesel powered equipment with CARB certified motor vehicle diesel fuel (non-taxed version suitable for use off-road);
- Use diesel construction equipment meeting CARB's Tier 2 certified engines or cleaner off-road heavy-duty diesel engines, and comply with the State Off-Road Regulation;
- Use on-road heavy-duty trucks that meet the CARB's 2007 or cleaner certification standard for on-road heavy-duty diesel engines, and comply with the State On-Road Regulation;
- Construction or trucking companies with fleets that that do not have engines in their fleet that meet the engine standards identified in the above two measures (e.g. captive or NO_x exempt area fleets) may be eligible by proving alternative compliance;
- All on and off-road diesel equipment shall not idle for more than 5-minutes. Signs shall be posted in the designated queuing areas and or job sites to remind drivers and operators of the 5-minute idling limit;
- Diesel idling within 1,000 feet of sensitive receptors is not permitted;
- Staging and queuing areas shall not be located within 1,000 feet of sensitive receptors;
- Electrify equipment when feasible;

- Substitute gasoline-powered in place of diesel-powered equipment, where feasible; and,
- Use alternatively fueled construction equipment on-site where feasible, such as compressed natural gas (CNG), liquefied natural gas (LNG), propane or biodiesel.

Best Available Control Technology (BACT) for Construction Equipment:
If the estimated construction phase ozone precursor emissions from the actual fleet for a given Phase are expected to exceed the APCD's threshold of significances after the standard mitigation measures are factored into the estimation, then **BACT needs to be implemented to further reduce these impacts. The BACT measures can include:**

1. Further reducing emissions by expanding use of Tier 3 and Tier 4 off-road and 2010 on-road compliant engines;

2. Repowering equipment with the cleanest engines available; and

3. Installing California Verified Diesel Emission Control Strategies. These strategies are listed at: https://www.arb.ca.gov/msprog/ordiesel/faq/vdecsfaq.pdf

MM AQ-1(b): APCD maintains a list of standard dust control measures which shall be implemented for all 2019 RTP projects in order to reduce PM_{10} emissions during project construction. Although developers are already required to implement these measures, the lead agency shall reference these measures in their conditions of approval for any project-specific RTP projects that involve construction.

MM AQ-1(c): If importation, exportation, or stockpiling of fill material is involved, soil stockpiled for more than two days shall be covered, kept moist, or treated with soil binders to prevent dust generation. Trucks transporting material shall be tarped from the point of origin.

Pursuant to guidance from SLOAPCD, compliance with the above mitigation measures would reduce construction-related air quality impacts to a **less than significant** level. Mitigation measure MM AQ-1(a) would generally reduce air pollutant emissions by expanding use of off-road and 2019 on-road compliant engines, requiring equipment with the cleanest engines available, and requiring the installation of California Verified Diesel Emission Control Strategies. These strategies are listed at: https://www.arb.ca.gov/msprog/ordiesel/faq/vdecsfaq.pdf

Mitigation measures MM AQ-1(b) and MM AQ-1(c) shall be applied as necessary to reduce construction impacts below the significance thresholds listed in **Figure 3.2-7**. According to the SLOAPCD CEQA Air Quality Handbook, updated in 2012 and 2017 Clarification Memo, the construction equipment mitigation measures and construction activity management practices

described in mitigation measure MM AQ-1(b) have been shown to significantly reduce emissions while maintaining overall equipment performance and project scheduling needs.

Long-Term Operations

Impact AQ-2: Implementation of the 2019 RTP would reduce emissions of ozone precursors as compared to what would occur if no transportation projects were implemented by promoting a multimodal transportation system and thereby reducing reliance on single-occupancy vehicle use. The RTP would also implement the CAP Transportation Control Measures. This is considered a **Class III, less than significant**, impact.

San Luis Obispo County has been deemed nonattainment for the state ozone and PM_{10} standard.

A central purpose and goal of the RTP is to reduce regional air emissions, primarily by promoting a multimodal transportation system, thus reducing reliance on the single-occupancy vehicle. The plan envisions a range of projects, including transit facilities, increased bus usage, bikeways, pedestrian facilities, and rail projects, that collectively support the multimodal concept and increase the mobility of the citizens of the county. In a qualitative sense, these projects will contribute to the achievement of air pollutant emissions reductions. A quantitative analysis of emissions that could result from implementation of the RTP is not feasible due to the varying time frames and other uncertainties regarding implementation of individual projects. Therefore, a qualitative analysis of the regional effects on air quality from implementation of the RTP follows.

As noted in **Section 2.0, Project Description**, the proposed RTP seeks to reduce the environmental impact of land use development by limiting the amount of land consumed and increasing the viability of walking, biking, and transit by balancing growth and conservation through the reinforcement of encouraging jobs-housing balance and compact-lot homes (that include Single Family homes on lots sized up to 6,000 sq. ft.) within existing communities. In many cases, existing transit service is aligned along corridors already zoned for such. This strategy will assist in encouraging urban growth limits, and managing where and how growth and conservation will occur. These "smart growth" strategies have well-documented benefits in terms of lower energy use and fewer and shorter vehicle trips since residents and employees of these areas have more home, work, and shopping opportunities within walking or biking distance. Transit is also a more viable form of transportation since these types of developments have a larger number of potential transit users and can support more frequent transit service to regional destinations. The proposed RTP focuses on how these strategies increase the viability of non-auto modes of travel and thereby decrease the number of vehicle trips and the amount of vehicle miles traveled (VMT), and thus pollutant emissions from mobile sources.

Air Quality Effects of Projects Included in the RTP

The list of transportation projects of the RTP includes limited widening and reconfiguration of existing roadways and construction of new transit and bicycle facilities. Of all the contemplated RTP projects, the roadway projects are considered to be the greatest source of long-term emissions because ozone precursors are generated primarily by on-road vehicles. Creating a multimodal transportation system and integrating land uses that facilitate walking, bicycling, and transit use can greatly lessen the need for auto-related facilities with a range of other transportation options that do not require as much conversion of land to roadways, parking lots, and other paved structures.

The SLOAPCD Clean Air Plan (CAP) includes nine transportation control measures (TCM) that are intended to reduce air emissions. Each TCM is evaluated below in terms of the various RTP projects intended to implement them.

Campus-Based Trip Reduction

This control measure is designed to reduce vehicle trips and vehicle miles traveled. The TCM primarily targets the student populations of California Polytechnic State University, San Luis Obispo (Cal Poly) and Cuesta College. The adopted control measure requires the development of individual programs tailored to meet the trip reduction needs of each campus, as well other major employers, such as PG&E (Diablo Canyon Nuclear Generating Station, Atascadero State Hospital, City of San Luis Obispo Government Center, and City of San Luis Obispo.

There are currently 17 park-and-ride lots located in San Luis Obispo County, with a total of 613 spaces available for commuter use. The RTP includes expansion or development of twenty (short, mid, and long-terms) additional lots, adding over 200 additional spaces. The proposed lots would bring the total number of Park-and-ride facilities to 37 countywide.

These facilities can be vacant lots where commuters predetermine to meet or large intermodal transportation facilities that link individuals to many other modes of transportation, including bus and rail. Park-and-ride lots are designed to reduce congestion and air pollution by tapping growing suburban commuter markets. Perhaps the greatest contributor to carpooling, vanpooling, and transit riding is the rapidly rising cost of fuel and automobile ownership. Counts of vehicles in park-and-ride lots consistently show increased lot usage rates throughout the county when fuel prices increase.

Voluntary Trip Reduction

This measure is designed to reduce the number of commute and other trips made with single-occupant vehicles through an outreach effort to employers to encourage voluntary participation in a worksite trip reduction program. The RTP supports actions to reduce single-occupant vehicles, with efforts focused on increasing carpooling, vanpooling, and use of public transit. Proposed RTP Action Strategy MSE 2 states that the agency should Actively encourage modal shifts to reduce single occupant vehicles (SOVs) by expanding

transportation options, including but not limited to, improvements for intercity rail, public transit, bicycling, Park & Ride lots, carpools, and vanpools and (AS/MSE 8) make information available to various systems and applications in order to best align with current and future trends and serve travelers' needs. In addition, RTP Action Strategies support local jurisdictions in the establishment of parking proximity, availability, and pricing strategies that reward people for carpooling and discourage single-occupant vehicle use.

Local Transit System Improvements

This measure focuses on improving local transit service and infrastructure. These improvements can encourage individuals to use public transit instead of private automobiles. As transit ridership increases, roadway congestion and emissions decrease. The goal of this measure is to increase transit ridership by 2.5 percent per year.

The proposed RTP includes a Public Transportation chapter (Ch. 11) in order to ensure that a viable public transportation system grows to meet the region's transit needs in the future. The RTP tested different two main transit service levels - "Reasonably-expected" and "With Supplemental Funding" (not financially constrained).

Regional Transit Improvements

The focus of this measure is on service and facility improvements for commuters, including intercity rail improvements as a trip reduction strategy. The goal of this measure is to increase transit ridership by 2 percent per year. The RTP's Reasonably-expected revenues projects a 2% increase in transit ridership for fixed route systems.

Bicycling and Bikeway Enhancements

The goal of this measure is to achieve a countywide average bicycle modal share of 5 percent within seven years. This measure improves air quality in two ways. First, it supports the voluntary trip reduction program by providing a safe and inexpensive way for employees to commute to work or school. In addition, bike infrastructure improvements will increase safety and convenience for those commuters not affected by the voluntary trip reduction program. The measure also facilitates cycling for shopping and other trip purposes.

The RTP includes several bikeway projects that would fill gaps in the existing county bikeway network. SLOCOG's Active Transportation program is designed to support and build upon the planning efforts of local jurisdictions. Earlier Regional Transportation Plans focused on construction of Class II bike lanes along routes of regional significance within local communities in the county. Many of these bike lanes have been completed over the past decade. The emerging emphasis is on connecting separated Class I facilities and critical gaps between communities. SLOCOG will continue to focus on regional segments of the California Coastal Trail and the San Juan Bautista de Anza Trail corridors.

Park-and-Ride Lots

Designed to support the trip reduction program, park-and-ride lots provide a staging area for ridesharing activities. The most common use of park-and-ride lots in San Luis Obispo County is as a meeting point for carpools and vanpools. Transit connections are available at some lots within a short walk, and bike lockers are available at most lots; however, the primary use of the lots is for automobile parking. Use of a park-and-ride lot will generally reduce the length of a commute trip, but not eliminate the trip. This reduces operational exhaust and evaporative emissions. However, if a park-and-ride lot is served by commuter transit or shuttle service, and adequate bicycle storage facilities are available on site, park-and-ride lots can reduce both vehicle miles traveled (VMT) and motor vehicle trips. The goal of this measure is to improve the trip reduction potential of park-and-ride lots by providing commuter transit service and adequate bicycle storage to existing and future park-and-ride lots in the county.

Motor Vehicle Inspection and Control Program

Vehicle inspection and maintenance programs, otherwise known as "smog-check" programs, are designed to ensure that emission control devices on motor vehicles continue to function properly. Inspection of vehicle emission control systems is typically required prior to vehicle re-registration. The state motor vehicle control program seeks to limit tailpipe emissions to such an extent that cars will have emissions substantially lower than cars sold in other states.

Traffic Flow Improvements

This control measure focuses on traffic flow improvements and "traffic calming." A strategy to directly benefit non-motorized forms of transportation, traffic calming refers to a range of methods designed to improve the flow of non-motorized transportation modes by slowing down the speed of motorized traffic. Traffic calming is generally used in residential areas on non-arterial local streets and roads. The goal of this measure is to improve the road system and infrastructure in a way that increases its efficiency, reduces emissions, and supports other TCMs in the Clean Air Plan. Peak hour traffic management should also increase pedestrian and bicycle safety.

The RTP proposes TSM strategies which emphasize the use of engineering methods, minor capital enhancements, and investments in alternative transportation to improve traffic flow and the overall performance of the system. One of the benefits of TSM is minimizing the need for major capital investments by improving the efficiency and operation of the existing transportation infrastructure. Typical measures include synchronization of traffic signals, intersection channelization, designation of one-way streets, transit system enhancements, improved parking management, expanded bikeway systems, and development of park-and-ride lots. Local and regional transportation providers (e.g., local/regional government, transit districts, Caltrans) implement the measures.

Telecommuting, Teleconferencing, and Telelearning
The objective of this measure is to reduce the number of trips and vehicle miles traveled by employees and students by promoting telecommuting, teleconferencing, and telelearning.

2019 RTP Goals, Policies, and/or Strategies that Serve to Reduce Potential Impacts
The operational impacts of the 2019 RTP on the attainment of state and federal air quality standards can be classified as **less than significant** and beneficial in both the short term and long term through the implementation of the goals, policies, and Action Strategies of the RTP.

Mitigation Measures

None required.

Consistency with Clean Air Plan

Impact AQ-3: The 2019 RTP is substantially consistent with the SLO Air Pollution Control District 2001 Clean Air Plan (CAP). **Class III, less than significant,** impacts related to RTP consistency with the CAP would result.

According to SLOAPCD, the consistency of the RTP with the Clean Air Plan should be determined by a consistency analysis to evaluate the following questions: (1) Are the population projections used in the plan or project equal to or less than those used in the most recent CAP for the same area? (2) Is rate of increase in vehicle trips and miles traveled less than or equal to the rate of population growth for the same area? (3) Have all applicable land use and transportation control measures from the CAP been included in the plan or project to the maximum extent feasible? If the answer to all of the above questions is yes, then the proposed project or plan is considered to be consistent with the CAP. If the answer to any one of the questions is no, then the emissions reductions projected in the CAP may not be achieved, which could delay or preclude attainment of the state ozone standard. This would be considered inconsistent with the CAP. The consistency of the 2019 RTP with each of these CAP components is described below.

Population Projection Consistency: Since the source of the 2019 RTP growth assumptions is the same as the CAP (i.e., the growth assumptions of the general plans of the respective county municipalities are consistent with the CAP, and the RTP projects are based on the general plans), the 2019 RTP is consistent with this CAP component.

VMT Rate/Population Growth Rate Consistency: The RTP anticipates a 2045 county population of 312,688 an increase of 17.6 percent over baseline conditions (2015). Most of the contemplated RTP projects (e.g., bike facilities, pedestrian improvements, intersection improvements, roadway rehabilitation/improvement projects) would not result in increases in the rate of trips or vehicle miles traveled.

It should be noted that roadway improvements do not directly generate vehicle trips. Rather, vehicle trips are generated by land use changes that may be indirectly influenced by

transportation improvements. Long-term impacts related to land use changes potentially induced as a result of roadway expansions and/or extensions are described in **Section 6.0, Other Sections Required by CEQA**, of this EIR. SLOCOG does not maintain direct authority over such land use changes and the associated generation of vehicle trips and air contaminant emissions.

2019 RTP Goals, Policies, and/or Strategies that Serve to Reduce Potential Impacts

This EIR incorporates the 2019 RTP's goals, policies, and action strategies (Chapter 3). RTP projects that increase roadway capacity could redistribute vehicle travel from other travel modes, times, or routes. However, this effect would not be expected to increase traffic congestion beyond pre-project conditions. In addition, the RTP includes several action strategies that encourage the use of transportation alternatives, versus single-occupant vehicles. Because roadway improvements do not, in themselves, generate new trips, on balance, implementation of the RTP would increase transit ridership and the utilization of other commute alternatives. Accordingly, the plan would reduce the number of daily vehicle trips and associated emissions in the county.

In addition, the proposed RTP seeks to reduce the environmental impact of land use development by limiting the amount of land consumed and increasing the viability of walking, biking, and transit by balancing growth and conservation through the improvement of job-housing balance and compact-lot homes (that include Single Family homes on lots sized up to 6,000 sq. ft.) within existing communities. This strategy will assist in establishing urban growth limits and managing where and how growth and conservation will occur. These "smart growth" strategies have well-documented benefits in terms of lower energy use and fewer and shorter vehicle trips since residents and employees of these areas have more home, work, and shopping opportunities within walking or biking distance. Transit is also a more viable form of transportation since these developments have a larger number of potential transit users and can support more frequent transit service to regional destinations. The proposed RTP focuses on how these strategies increase the viability of non-auto modes of travel and thereby decrease the number of vehicle trips and the amount of VMT, and thus pollutant emissions from mobile sources.

By 2045, the RTP projects a rate of vehicle miles of travel, per capita, to be equal to or less than 21.6 per capita (based on SB 375 modeling requirements). This is nearly 2 miles less than the 21.6 VMT per capita in 2015. Overall, the RTP would not be expected to result in an increase in the rate of VMT equal to or greater than

TCM Consistency: As described in the discussion of Impact AQ-2, proposed RTP strategies and projects would support implementation of the transportation control measures included in the Clean Air Plan.

The growth assumptions in the RTP are consistent with those used in the CAP. In addition, the RTP includes roadway and intersection improvements that reduce existing and future congestion, thereby reducing emissions. The RTP includes projects that promote the

implementation of a majority of the Clean Air Plan TCMs. Therefore, the RTP is considered consistent with the CAP, resulting in a **less than significant** impact.

Mitigation Measures

None required.

Hot Spot Emissions

Impact AQ-4: Implementation of RTP roadway improvement, transit, and TSM/TDM projects would not result in localized traffic congestion that causes localized carbon monoxide (CO) emission hot spots. This would be considered a **Class III, less than significant**, impact.

Carbon monoxide (CO) is considered to have a significant air quality impact if the additional CO from a project creates a "hot spot" where the California 1-hour standard of 20 parts per million carbon monoxide is exceeded. This exceedance typically occurs at severely congested intersections. According to SLOAPCD, projects which emit more than 550 pounds per day of carbon monoxide (CO) and occur in a confined or semi-confined space (e.g., parking garage or enclosed indoor stadium) must be modeled to determine their significance. If modeling shows the potential to violate the California CO air quality standard, mitigation or project redesign is required to reduce carbon monoxide concentrations to a level below the health-based standard.

Implementation of the projects contemplated in the RTP would improve traffic congestion and levels of service of roadways within the jurisdictions in the county through Intelligent Transportation Systems (ITS) projects, intersection improvements such as signalization and restriping, and congestion management strategies. Implementation of the RTP would not result in significant localized carbon monoxide emissions due to the SLOAPCD requirement that all subsequent projects under the RTP that emit more than 550 pounds per day of CO and occur in a confined or semi-confined space be modeled to determine their significance, and if the potential to violate the California CO air quality standard is determined, mitigation or project redesign is required. As a result, this is considered a **less than significant** impact.

State CEQA Guidelines Section 15145 notes that if, after thorough investigation, a lead agency finds that a particular impact is too speculative for evaluation, the agency should note its conclusion and terminate discussion of the impact. An evaluation of the site-specific impacts of many of the types of projects for which sites have not been defined (including several park-and-ride lot projects) would be speculative, as neither the existing nor the post-project conditions of the sites can be assessed. Nevertheless, these projects will be required to undergo environmental review pursuant to CEQA when site plans are defined, prior to project implementation.

2019 RTP Goals, Policies, and/or Strategies that Serve to Reduce Potential Impacts
This EIR incorporates the 2019 RTP's goals, policy objectives, and action strategies as listed in 2019 RTP Chapter 3 which is included in **Volume II, Technical Appendices**. Included action strategies serve as mitigation under **Impact AQ-2**.

Mitigation Measures

None required.

Sensitive Receptors

Impact AQ-5: Implementation of RTP transit service projects could result in stationary or semi-stationary emissions sources that expose sensitive receptors to substantial pollutant concentrations, such as diesel exhaust. This would be considered a **Class II, significant but mitigable**, impact.

Some RTP projects (e.g., transit station upgrades) could result in stationary or semi-stationary emissions sources, such as idling buses. These projects may result in vehicle emissions, including diesel exhaust emissions, which could affect adjacent sensitive receptors. Overall, the RTP projects would be expected to improve traffic flow in the county. Implementation of the RTP would reduce vehicle emissions as compared to what would occur if no transportation projects were implemented. Nevertheless, projects that result in stationary or semi-stationary emissions sources could expose sensitive receptors to substantial pollutant concentrations, which would be considered a potentially significant impact unless mitigation is incorporated.

It should be noted that RTP roadway and aviation projects would not result in significant emissions from a stationary or semi-stationary source that could affect sensitive receptors because the nature of the RTP only affects mobile source emissions.

As previously described, the State CEQA Guidelines Section 15145 notes that if, after thorough investigation, a lead agency finds that a particular impact is too speculative for evaluation, the agency should note its conclusion and terminate discussion of the impact. An evaluation of the site-specific impacts of many of these types of projects for which sites have not been defined (including several rail station projects in Grover Beach, Paso Robles, and San Luis Obispo) would be speculative, as neither the existing nor the post-project conditions of the sites can be assessed. Nevertheless, these projects will be required to undergo environmental review pursuant to CEQA when site plans are defined, prior to project implementation. The following mitigation measures are required for projects that are demonstrated to significantly impact sensitive receptors.

2019 RTP Goals, Policies, and/or Strategies that Serve to Reduce Potential Impacts
This EIR incorporates the 2019 RTP's goals, policies, and action strategies as listed in Chapter 3, which is included in **Volume II, Technical Appendices**.

Mitigation Measures

MM AQ-5: The agencies that propose a transit improvement projects should, first and foremost, consider sensitive receptors in the siting and design of transit facilities. Given that, the most effective mitigation is at the source, during the specification and design of transit vehicles. Agencies should implement measures, where feasible, to minimize noise impacts on sensitive receptors through initially focusing upon operating restrictions and technical measures, such as damped wheels for buses. Along the transit pathway or route, sound barriers should be considered. And, at the receiver end, sound walls and building noise insulation should be considered. The Federal Transit Administration has published a report assessing noise impacts associated with transit. The 2018 FTA Report also includes costs related to various types of mitigation, which is helpful in determining feasibility of these measures.

Implementation of the above mitigation measure would reduce impacts to sensitive receptors to **less than significant**.

3.3 BIOLOGICAL RESOURCES

This section outlines San Luis Obispo County's biological and natural resource setting in addition to the county, state, and federal regulatory framework pertaining to biological resources. The evaluation in this section was based on a review of existing literature, SLO County policies and programs, and previous EIRs completed for projects in the county. The biology setting is primarily based on applicable information provided by the Conservation and Open Space Element (COSE),adopted on May 11, 2010 (SLO County 2010a), the certified SLOCOG 2010 RTP EIR (SLOCOG 2010b), field visits conducted by SLOCOG staff, and previous EIRs prepared by the County.

3.3.1 Existing Setting

San Luis Obispo County has many significant biological features. Attributes include several distinct vegetation and wildlife habitat communities, plant and animal species of rare and/or endangered status, depleted or declining species, and species or habitat types of limited distribution, such as wetlands.

Habitats/Natural Communities
The term *natural community* is generally intended to refer to plant and wildlife associates in specific habitat types. San Luis Obispo County has a diversity of natural communities, ranging from marine to riparian and woodland to grassland. Within each of these habitat groups there is considerable species variation. Important habitat types in the county are discussed below.

The Nipomo Dunes are a national natural landmark located south of Point Buchon and are host to a large number of endemic and rare plant species, as well as dune upland lakes and wetlands.

Estuaries are a notable feature of coastal areas, occurring wherever flowing streams meet the ocean, and are the nursery for the local fisheries along the coastline. Small coastal lagoons and marshes are scattered along the coast. Morro Bay contains the region's largest estuary, with a saltwater marsh located on the east side where Chorro and Los Osos creeks enter the bay. This is one of the most significant wetlands remaining on the California coast, providing nesting habitat for blue herons, cranes, and other important species of birds and wildlife. The Morro Bay estuary is also a designated state and national estuary.

The Upper Salinas River Valley is characterized by a variety of vegetation communities including riparian, oak woodlands, wetlands, native and non-native grasslands, and chaparral. Coast live oak and blue oak are dominant features of the landscape, with a variety of wildlife supported by the oak woodlands scattered throughout the area. Riparian trees such as sycamores, cottonwoods, and willows are common along drainage channels,

streams, reservoirs, and marshes. Grassland vegetation is widespread on the rolling hills and flat areas that are either too dry to support oak woodland or have been cleared of oaks in the past.

The Carrizo Plain is a basin located in the east county and is a dry salt lake with alkali flats and saltbush-scrub as the principal vegetation. The upland areas are characteristic of an arid prairie, with little vegetation except dry grass. This region is best described as a steppe, which is a dry grass-covered area with wide temperature fluctuations.

Coastal Streams are environmentally sensitive habitat areas (perennial and intermittent). Several coastal streams may support steelhead trout during periods of sufficient flow. Steelhead trout are anadromous rainbow trout that return to spawn in freshwater streams during the spring. This species is an important fishery resource along the entire west coast and is listed as threatened by the National Marine Fisheries Service. The biggest threat to this species is damming of coastal streams; however, they are also threatened by low in-stream flows resulting from water diversion, groundwater pumping, and water quality degradation due to erosion.

Sensitive Habitat/Natural Communities

Sensitive natural communities in the county include central dune scrub, central maritime chaparral and serpentine bunchgrass communities, wetlands (including freshwater and saltwater marsh communities), Monterey pine forests, valley oak woodlands, and riparian and shoreline areas.

Sensitive Species

San Luis Obispo County is home to several species protected by federal and state agencies. The term *sensitive species* includes plants and animals that are officially listed by a regulatory organization or agency as protected and those considered to be of local concern by recognized monitoring agencies, such as the California Native Plant Society (CNPS). San Luis Obispo County affords protection to sensitive plant and animal species identified by the County and California Department of Fish and Wildlife (CDFW). Vegetation in the county is diverse and includes several habitats and listed species. Species of particular concern include native grasses, special forests, and protected riparian and wetland species as the county has specific regulations for grassland, special forest, riparian, and wetland habitats.

Special-Status Species

Special-status species are those plants and animals listed, proposed for listing, or candidates for listing as threatened or endangered by the U.S. Fish and Wildlife Service (USFWS) under the federal Endangered Species Act (ESA); those considered "species of concern" by the USFWS; those listed or proposed for listing as rare, threatened, or endangered by the CDFW under the California Endangered Species Act (CESA); and animals designated as "Species of Special Concern" by the CDFW.

Plants and Wildlife

Based on a review of CDFW's California Natural Diversity August 2018 Database (CNDDB_Endangered_Threatened_and_Rare_Plants_List.pdf) and USWFS' *Listed Threatened and Endangered Species which May Occur in San Luis Obispo County, CA,* 284 special-status plant species. A total of 86 wildlife species were identified as having the potential to occur in San Luis Obispo County. Listings of sensitive wildlife species with the potential to occur or known to occur in the county are included in California State University, Monterey Bay's Central Coast Watershed Database

The San Joaquin kit fox, steelhead trout, California red-legged frog, and Morro shoulderband snail are high priority species in the county. The following wildlife species appear to be the known priority species, among others:

Fish. Native fish species that may potentially occur in streams in the county include the partially-armored threespine stickleback, speckled dace, and prickly sculpin. Resident species of rainbow trout may also be present in the upper reaches of perennial streams in the county. Migratory steelhead trout are known to occur seasonally in coastal streams such as Chorro and Toro creeks. In addition, marine species such as staghorn sculpin will often enter coastal lagoons and estuarine habitats to feed and/or reproduce during the winter and spring.

Amphibians. Various amphibian species potentially utilize coastal streams and adjoining riparian corridors in the county. The more common of these amphibians include native species such as Pacific chorus frog, western toad, and newts, as well as the non-native bullfrog. Other less-common amphibians include California tiger salamander and California red-legged frog. Some of the amphibians that occur in the Estero planning area will utilize adjoining protected upland areas where sufficient moisture is present.

Reptiles. Reptiles occur in a diverse array of habitats throughout the county. Species that are expected to be present include, but are not limited to, western skink, species of lizard, gopher snake, common kingsnake, garter snake, western rattlesnake, and southwestern pond turtle.

Mammals. The assorted habitats of the county support a variety of mammals including opossum, rabbit, gopher, squirrel, coyote, raccoon, gray fox, bobcat, mountain lion, skunk, badger, black-tailed deer, weasel, ringtail, and several species of rodents and bats. Marine mammals such as the southern sea otter, California sea lion, and harbor seal utilize marine intertidal and estuarine habitats for feeding and haul-out along rocky shore areas.

Birds. Birds are found in every habitat throughout the county. Typical species that utilize open grassland areas and fields include red-tailed hawk, red-shouldered hawk, American kestrel, Cooper's hawk, white-shouldered kite, western meadowlark, Say's phoebe, and western bluebird. Riparian habitats support Anna's hummingbird, northern flicker, scrub jay, bushtit, black phoebe, belted kingfisher, black-crowned night heron, and white-breasted

nuthatch. Woodlands and coastal scrub areas provide resources for California quail, acorn woodpecker, brown towhee, and dark-eyed junco. Wading birds such as the snowy and great egret and great blue heron frequent and utilize coastal saltmarsh and freshwater marsh habitats for feeding. Migratory shorebirds, including snowy plovers, avocets, sandpipers, and marbled godwits, occur in and utilize open sandy beach areas and estuarine habitats. Telephone poles and tall trees provide roosting and hunting perches for raptors including red-tailed and red-shouldered hawks. Windrow trees such as eucalyptus often provide suitable nesting sites for birds of prey such as the great horned owl and barn owl.

Insects. Insects occur in all habitats in the county. They are considered valuable food sources for a variety of wildlife and often function as indicators as to the overall health of various habitats, particularly aquatic. The variety of insect species occurring in the county is extensive, and representatives from all insect orders are expected to occur.

Critical Habitat

Under the Endangered Species Act, critical habitat is defined as:

1. The specific areas within the geographic area occupied by a federally listed species on which are found physical and biological features essential to the conservation of the species, and that may require special management considerations or protection; and
2. Specific areas outside the geographical area occupied by the species if the agency determines that the area itself is essential for conservation.

Wildlife Movement Corridors

Wildlife movement corridors occur between different plant communities and between similar plant communities that are noncontiguous. Corridors will allow species to travel between different habitats and provide for physical and genetic exchange between animal populations.

Migration corridors provide critical linkages between what has or may become larger "islands" of intact native vegetation. Drainage courses, such as the Salinas River, and adjacent upland habitat typically function as migration corridors providing water and cover for animals. Functioning migration corridors occur at various scales. The Salinas River, for example, is a large-scale corridor that has an obvious tree- and shrub-lined corridor. Smaller-scale functioning corridors exist as intermittent drainage channels and small patches of narrow vegetation. Both small and large-scale corridors are important for wildlife protection and enhancement.

3.3.2 Regulatory Framework

Federal

Endangered Species Act

The Endangered Species Act of 1973 (ESA) provides for the conservation of species that are endangered or threatened throughout all or a significant portion of their range and the conservation of the ecosystems on which they depend. In general, the National Oceanic and Atmospheric Administration National Marine Fisheries Service (NOAA Fisheries) is responsible for protection of ESA-listed marine species and anadromous fish while other listed species come under U.S. Fish and Wildlife Service jurisdiction. Endangered refers to species, subspecies, or distinct population segments that are in danger of extinction throughout all or a significant portion of their range while threatened species applies to species, subspecies, or distinct population segments that are likely to become endangered in the near future. The law prohibits any action, administrative or real, that results in a "taking" of a listed species or adversely affects habitat. Likewise, import, export, interstate, and foreign commerce of listed species are all prohibited. "Take" is defined in the ESA as to harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect any threatened or endangered species. Harm may include significant habitat modification where it actually kills or injures a listed species through impairment of essential behavior (e.g., nesting or reproduction).

In 2018, U.S. Fish and Wildlife Service (FWS) and National Marine Fisheries Service (NMFS) proposed several major regulatory changes to ESA. These changes, if implemented, will affect the Section 4(d) special rules for species listing, as well as the consultation provisions. An important change is an exemption provision for activities that would "have effects that are manifested by global processes" (i.e. climate change).

USFWS Candidate Species List

The United States Fish and Wildlife Service (USFWS) also publishes a list of candidate species. Species on this list receive special attention from the federal agencies during environmental review, although they are not protected otherwise under the ESA. The candidate species are those for which the USFWS has sufficient biological information to support a proposal to list the species as endangered or threatened.

Bald and Golden Eagle Protection Act

The Bald and Golden Eagle Protection Act of 1940 imposes criminal and civil penalties for persons in the U.S. or within U.S. jurisdiction lands who take, possess, sell, purchase, barter, offer to sell or purchase or barter, transport, export or import a bald eagle or golden eagle, alive or dead, of any part, nest, or egg of these eagles; or violate any permit or regulations issued under the act without the permission of the Secretary of the Interior.

The Secretary of the Interior may permit the taking, possession, and transportation of bald and golden eagles and nests for scientific or religious purposes, or for the protection of

wildlife, agricultural, or other interests, if such actions are compatible with eagle preservation. The Secretary of the Interior may authorize the take of golden eagle nests that interfere with resource development or recovery operations.

Migratory Bird Treaty Act

Migratory birds are protected under the Migratory Bird Treaty Act (MBTA) of 1918 (16 USC 703–711). The MBTA makes it unlawful to take, possess, buy, sell, purchase, or barter any migratory bird listed in 50 CFR Part 10, including feathers or other parts, nests, eggs, or products, except as allowed by implementing regulations (50 CFR 21). The vast majority of birds found in the study area are protected under the MBTA. Thus, project construction has the potential to directly take nests, eggs, young, or individuals of these protected species. Further, construction disturbance during the breeding season could result in the incidental loss of fertile eggs or nestlings, or otherwise lead to the abandonment of nests, a violation of the MBTA.

Clean Water Act

The federal Clean Water Act (CWA) was enacted as an amendment to the federal Water Pollution Control Act of 1972, which outlined the basic structure for regulating discharges of pollutants to waters of the United States. The CWA serves as the primary federal law protecting the quality of the nation's surface waters, including lakes, rivers, and coastal wetlands. The following discussion gives background information as relevant to biological resources.

Section 404

CWA Section 404 regulates the discharge of dredged and fill materials into waters of the United States. Waters of the United States refers to oceans, bays, rivers, streams, lakes, ponds, and wetlands. Applicants must obtain a permit from the U.S. Army Corps of Engineers (Corps) for all discharges of dredged or fill material into waters of the United States, including wetlands, before proceeding with a proposed activity.

Compliance with CWA Section 404 requires compliance with several other environmental laws and regulations. The Corps cannot issue an individual permit or verify the use of a general nationwide permit until the requirements of the National Environmental Policy Act (NEPA), ESA, and the National Historic Preservation Act (NHPA) have been met. In addition, the Corps cannot issue or verify any permit until a water quality certification or a waiver of certification has been issued pursuant to CWA Section 401.

State

Z'berg-Nejedly Forest Practice Act of 1973

The California Forest Practice Rules (Title 14, California Code of Regulations Chapters 4, 4.5 and 10) implement the provisions of the Z'berg-Nejedly Forest Practice Act of 1973. Under the rules,land owners converting timberland to another use (as defined in Section 1102)

must obtain a Timberland Conversion Permit from the California Department of Forestry and Fire Protection.

Oak Woodlands Conservation Act

California State Senate Bill 1334, the Oak Woodlands Conservation Act, became law on January 1, 2005, and was added to the CEQA statutes as Section 21083.4. This statute requires that a county must determine whether or not a project will result in a significant impact on oak woodlands and, if it is determined that a project may result in a significant impact on oak woodlands, the County shall require one or more of the following mitigation measures:

- Conserve oak woodlands through the use of conservation easements;
- Plant an appropriate number of trees, including maintenance of plantings and replacement of failed plantings;
- Contribute funds to the Oak Woodlands Conservation Fund for the purpose of purchasing oak woodlands conservation easements;
- Other mitigation measures developed by the County.

This law protects oak woodlands that are not protected under the California Forest Practice Act. Agricultural projects are exempt from the act because they involve agricultural land that includes land used to produce or process plant or animal products for commercial purposes.

California Endangered Species Act

The California Endangered Species Act (CESA) establishes state policy to conserve, protect, restore, and enhance endangered or threatened species and their habitats. The CESA is administered by the California Department of Fish and Wildlife (CDFW). The CESA prohibits all persons from taking species that are state listed as endangered or threatened except under certain circumstances. Definitions of endangered and threatened species in the CESA parallel those defined in the ESA. Take authorizations from California Department of Fish and Wildlife are required for any unavoidable impact on state-listed species resulting from proposed projects. Before considering a species for protected status, DFW designates the species as a species of special concern. Species of special concern are those species for which DFW has information to indicate that the species is declining.

California Fish and Game Code

The California Fish and Game Commission protects wildlife and plants listed as endangered or threatened under the California Endangered Species Act (CESA). The California Department of Fish and Wildlife (CDFW) administers the CESA. The California Fish and Game Code identifies species that are fully protected and protects all birds and their nests. The CDFW also has jurisdictional authority over streams and lakes and the wetland resources associated with these aquatic systems under California Fish and Gam*e* Code Sections 1600 et seq.

Fully Protected Species
Certain species are considered fully protected, meaning that the code explicitly prohibits all take of individuals of these species except for take permitted for scientific research. Section 5050 lists fully protected amphibians and reptiles, Section 5515 lists fully protected fish, Section 3511 lists fully protected birds, and Section 4700 lists fully protected mammals. It is possible for a species to be protected under the California Fish and Game Code, but not fully protected. For instance, mountain lion (*Puma concolor*) is protected under Section 4800 et seq., but is not a fully protected species.

Protection of Birds and Their Nests
Eggs and nests of all birds are protected under Fish and Game Code Section 3503, nesting birds (including raptors and passerines) under Sections 3503.5 and 3513, and birds of prey under Section 3503.5. Migratory nongame birds are protected under Section 3800 and other specified birds under Section 3505. Section 3503.5 specifically states that it is unlawful to take, possess, or destroy any raptors (i.e., hawks, owls, eagles, and falcons), including their nests or eggs.

Stream and Lake Protection
The Department of Fish and Wildlife has jurisdictional authority over streams and lakes and the wetland resources associated with these aquatic systems under California Fish and Game Code Sections 1600 et seq. CDFW has the authority to regulate work that will

> *substantially divert or obstruct the natural flow of, or substantially change or use any material from the bed, channel, or bank of, any river, stream, or lake, or deposit or dispose of debris, waste, or other material containing crumbled, flaked, or ground pavement where it may pass into any river, stream, or lake.*

CDFW enters into a streambed or lakebed alteration agreement with the project proponent and can impose conditions in the agreement to minimize and mitigate impacts to fish and wildlife resources. A lake or streambed alteration agreement is not a permit, but rather a mutual agreement between CDFW and the project proponent. CDFW jurisdiction may be broader than Corps jurisdiction because CDFW jurisdiction includes streamside habitats that may not qualify as wetlands under the federal Clean Water Act definition...

A project proponent must submit a notification of streambed alteration to CDFW before construction. The notification requires an application fee for streambed alteration agreements, with a specific fee schedule to be determined by CDFW. CDFW can enter into programmatic agreements that cover recurring operation and maintenance activities and regional plans. These agreements are sometimes referred to as Master Streambed Alteration Agreements.

Native Plant Protection Act
The Native Plant Protection Act (NPAA) was enacted in 1977 to protect rare and endangered plants. The act directs the California Department of Fish and Wildlife to carry out the

Legislature's intent to "preserve, protect, and enhance rare and endangered plants in this State." The NPAA gave the California Fish and Game Commission the power to designate native plants as endangered or rare and to require permits for collecting, transporting, or selling such plants.

Wildlife Corridors

Wildlife corridors refer to established migration routes commonly used by resident and migratory species for passage from one geographic location to another. Corridors are present in a variety of habitats and link undisturbed areas that would otherwise be fragmented. Maintaining the continuity of established wildlife corridors is important to (a) sustain species with specific foraging requirements, (b) preserve a species' distribution potential, and (c) retain diversity among many wildlife populations. Therefore, resource agencies consider wildlife corridors to be a sensitive resource.

Regional

Regional Habitat Conservation Planning Efforts

Regional scale conservation planning efforts are occurring through the development of habitat conservation plans (HCPs) and natural community conservation plans (NCCPs). Section 10(a) of the Endangered Species Act authorizes HCPs and allows issuance of incidental take permits upon approval of a conservation plan developed by the permit applicants. In 1991, the State of California passed the Natural Community Conservation Planning Act, which established the natural community planning program. NCCPs are carried out under state law and can be even broader than HCPs.

Local

The County uses a combination of the General Plan, Land Use Ordinances, and CEQA Guidelines, where applicable, to avoid or minimize impacts of development and urbanization to sensitive biological resources. In many cases, the County incorporates state and federal approaches to protect sensitive resource areas.

The County's Inland and Coastal Land Use Ordinances apply the Sensitive Resource Area (SRA) combining designation to areas of the county with special environmental qualities or areas containing unique or endangered vegetation or habitat resources. The purpose of these combining designation standards is to require that proposed uses be designed with consideration of the identified sensitive resources and the need for their protection. Development is permitted in sensitive resource areas provided that it does not create significant adverse effects on the natural features of the site or vicinity that were the basis for the SRA designation and that it will preserve and protect such features through the site design.

San Luis Obispo County Oak Woodland Ordinance, 2017

San Luis Obispo County is home to a wide variety of oak woodland habitats. These habitats provide numerous economic and environmental benefits on both a local and regional level.

Historically, oak woodlands have provided a foundation for livestock grazing and habitat for a variety of plants and animals, and helped purify the water we drink and filter the air we breathe. During the last century, local oak woodlands have been most substantially affected by:

- Tree removal for urban development, agriculture, charcoal, and firewood
- Introduction of non-native, competitive plants
- Excessive livestock grazing
- Conversion from grazing to more intensive uses, such as crop production and urban development

The county's 2017 Oak Woodland Ordinance established criteria to limit the clear-cutting of oak woodland. The intent of this ordinance was to maintain the character of the existing landscape and promote oak woodland management independent of regulation. (SLO County 2017a)

3.3.3 Impacts and Mitigation Measures

Standards of Significance

The significance of potential impacts on biological resources is based on the CEQA Statute Sections 21083 and 21087, CEQA Guidelines Section 15065, Mandatory Findings of Significance, and the CEQA Initial Study Checklist (Appendix G of the CEQA Guidelines). Implementation of the RTP would create a significant impact on biological resources if any of the Plan's contemplated projects would result in any of the following:

Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special-status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Wildlife or U.S. Fish and Wildlife Service.

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

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

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

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

Conflict with the provisions of an adopted habitat conservation plan, natural community conservation plan, or other approved local, regional, or state habitat conservation plan.

Methodology

Potential impacts were determined based upon a general field reconnaissance of areas where specific projects would be located. This analysis is conducted at a general level, recognizing the programmatic nature of the RTP; therefore, it focuses on the potential implications of the proposed Plan policies, versus the individual project-level effects of specific projects. **Section 5.0, Cumulative Impacts,** analyzes the cumulative impacts.

Impacts and Mitigation Measures

This section describes generalized biological resources impacts associated with implementation of the RTP.

Wetland/Riparian Habitats

Impact B-1: Construction activity associated with implementation of certain 2019 RTP roadway projects may temporarily disturb wetland or riparian habitats and/or other biological resources. This is considered a **Class II, significant but mitigable**, impact.

Most of the RTP capital improvements consist of minor expansions of existing facilities, resulting in only relatively minor disturbance to environmentally sensitive areas. However, other projects may involve construction in proximity to, or across, streams or may encroach upon other sensitive areas. And still others, such as bike paths, could involve development along riparian corridors and/or in coastal areas. Construction of these facilities could have both direct impacts due to disturbance of riparian and/or coastal flora and fauna and indirect impacts due to increased erosion and sedimentation, which would adversely affect downstream water quality. This is considered a **potentially significant** impact. However, proposed facilities might, at the same time, divert existing informal use of sensitive habitat areas, which would be considered a **beneficial** impact.

Certain RTP projects involve the extension or widening of existing roadways in rural, agricultural areas of the county. Though agricultural lands are not typically inhabited by large numbers of rare, threatened, or endangered species, they can include such resources as wetland elements and oak trees, which could be disturbed by construction activity. Such disturbance would also have the potential to adversely affect species that inhabit these types of areas, including various amphibians, songbirds, fish, and raptors. Projects in rural and agricultural areas would generally need site-specific review to definitively determine the extent of impacts and types of mitigation necessary.

A number of regulatory mechanisms, discussed in the Regulatory Framework section, are in place to address construction-related impacts to wetlands. Disturbance within any water of

the U.S. would require a Section 404 permit from the U.S. Army Corps of Engineers, which would place certain requirements for avoidance or replacement of lost wetland habitat. When a project would alter the natural flow or bed, channel, or bank of any river, stream, or lake, a Section 1601 streambed alteration agreement would need to be obtained from the California Department of Fish and Wildlife. Like the 404 permit, this agreement would be expected to include measures that alleviate impacts to riparian habitats. Preparation and implementation of the stormwater pollution prevention plans (SWPPPs) required under Section 401 of the Clean Water Act are intended to alleviate potential indirect impacts relating to increased erosion, sedimentation, and runoff.

RTP improvements are not expected to significantly affect oak woodland or chaparral habitats. However, construction could also adversely affect trees on an individual basis, including oak trees, resulting in a **potentially significant** impact.

2019 RTP Goals, Policies, and/or Strategies that Serve to Reduce Potential Impacts
This EIR incorporates the 2019 RTP's goals, policy objectives, and action strategies as listed in 2019 RTP Chapter 3 which is included in Volume II, Technical Appendices. Included action strategies serve to: Conserve and protect natural and sensitive resources, protect important farmland, valuable habitats, and natural resources, protect and enhance sensitive resources and mitigate adverse impacts to the environment, work with federal, state, local agencies and other stakeholders to delineate priority areas.

In addition, at the time of specific project-level environmental review, the lead agency shall ensure compliance with the following mitigation measures, through placement of conditions of approval on applicable projects, to reduce impacts to a less than significant level:

Mitigation Measures

MM B-1(a): In the event that wetlands/riparian habitats/other jurisdictional habitat loss is unavoidable, the lead agency shall ensure the following:

1. As a first course of action, mitigation should be in-kind and on-site with no net destruction of habitat value. Additional mitigation beyond compliance with the requirements of existing regulations pertaining to biological resources would be required at a ratio that meets applicable regulatory agency requirements.

-or-

2. Where in-kind and on-site mitigation is not feasible, implementing agencies shall develop a mitigation plan or habitat conservation plan (HCP), in consultation with regulatory agencies to mitigate impacts to riparian areas or wetlands. Mitigation shall be at a minimum 2:1 ratio.

In the event a regional HCP or multi-species conservation plan is developed at some point in the future, implementing agencies could participate in such a mitigation scheme as another option.

MM B-1(b): The lead agency for an RTP project impacting oak trees shall ensure that construction around oak trees or areas of impact require a tree protection and replacement plan. The plan may include, but would not be limited to, setbacks from trees and protective fencing, restrictions regarding grading and paving near trees, direction regarding pruning and digging within root zone of trees, and requirements for replacement and maintenance of trees.

Compliance with the above mitigation measures would ensure that impacts disturbing wetland or riparian habitats and/or other biological resources, including oak trees, would be reduced to a **less than significant** level.

Natural Habitat Areas/Sensitive Species/Wildlife Corridors

Impact B-2: Implementation of certain RTP projects could permanently alter natural habitat areas, affect sensitive species, and/or create barriers to wildlife corridors. Impacts of many individual projects can likely be mitigated to a less than significant level. However, because the feasibility of mitigation cannot be determined at this time, this impact is considered **Class I, significant and unavoidable**.

In general, the capital improvement projects envisioned in the RTP involve expansion of existing facilities in urbanized or already developed areas, and/or within existing rights-of-way, rather than extension of infrastructure into undeveloped portions of the county. Therefore, most contemplated improvements would not be expected to adversely affect important biological habitats. However, it is conceivable that RTP roadway extension, widening, and realignment projects could permanently alter natural areas, remove locally protected trees and vegetation, and affect federal, state, and locally protected habitats and/or species. In addition, such projects could create barriers to wildlife movement in identified wildlife corridors, including creek channels.

Several individual projects would increase human activity in areas where significant biological resources could occur. In particular, bikeway and pedestrian projects could increase human activity in the vicinity of riparian areas and potentially sensitive coastal habitats. However, as previously noted, several contemplated bikeway and pedestrian projects would divert existing informal use of sensitive habitat areas, which would be considered a **beneficial** impact. The introduction of more human activity into potentially sensitive areas would increase the potential for conflicts with sensitive plant and wildlife species. Additionally, transportation projects in coastal zones could result in impacts on natural and man-made adapted habitats that support sensitive biological resources. The significance of potential impacts would need to be addressed on a case-by-case basis through

site-specific studies as individual projects are proposed. Though it appears likely that impacts could be mitigated through careful site planning, post-construction restoration, and/or on- and off-site mitigation, impacts are considered **potentially significant**.

The RTP does not envision large-scale changes to San Luis Obispo County's natural environment, however; the cumulative effect of the RTP's transportation improvements would contribute to a change to a more urban character in some instances. This change and associated increase in human activity countywide may be considered detrimental to sensitive biological resources throughout the county. However the RTP's emphasis on operational and efficiency improvements, coupled with and increased emphasis on demand management and alternative modes would be a beneficial effect. Implementation of park and ride projects could also result in impacts on natural habitat areas, which would be considered a **potentially significant** impact.

2019 RTP Goals, Policies, and/or Strategies that Serve to Reduce Potential Impacts
This EIR incorporates the 2019 RTP's goals, policy objectives, and action strategies as listed in 2019 RTP Chapter 3 which is included in Volume II, Technical Appendices. Compliance with RTP goals and policies under **Impact B-1** would also reduce project impacts related to natural habitat areas/sensitive species.

In addition, at the time of specific project-level environmental review, the lead agency shall ensure compliance with the following mitigation measures, through placement of conditions of approval on applicable projects, to reduce impacts to a less than significant level:

Mitigation Measures

MM B-2: The lead agency for an RTP project with potentially significant long-term effects to biological resources shall ensure that project-specific environmental reviews implement specific mitigation measures and/or alternative alignments that avoid or minimize impacts to natural habitat areas, affected sensitive species, and/or wildlife corridors.

Compliance with **MM B-1(a-b)** would reduce potential impacts to sensitive natural communities such as wetland riparian habitats and oak tree communities to a **less than significant** level. Compliance with existing regulations, in combination with careful site planning and development of specific mitigation measures on a case-by-case basis, would likely reduce impacts to natural habitat areas, sensitive species, and wildlife corridors to a less than significant level for many improvement projects. However, because the actual magnitude of impacts and feasibility of mitigation for individual projects cannot be determined at this time, the biological resource effect of RTP implementation is considered **significant and unavoidable**.

Habitat Conservation Plan Conformance

Impact B-3: Implementation of certain RTP projects would occur in areas subject to the requirements of habitat conservation plans (HCP). Potential RTP project impacts on species and habitat protected under an HCP would be considered a **Class II, significant but mitigable**, impact.

Several habitat conservation plan (HCP) areas are located in the county. RTP projects would involve roadway widening, extension, or realignment and/or transportation facility construction within areas subject to HCPs. These projects could potentially affect the species and habitat protected under an HCP, which would be considered a **significant but mitigable** impact.

2019 RTP Goals, Policies, and/or Strategies that Serve to Reduce Potential Impacts

This EIR incorporates the 2019 RTP's goals, policy objectives, and action strategies as listed in 2019 RTP Chapter 3 which is included in Volume II, Technical Appendices. Compliance with RTP goals and policies identified under **Impact B-1** would also reduce project impacts related to habitat conservation plan conformance.

In addition, at the time of specific project-level environmental review, the lead agency shall ensure compliance with the following mitigation measures, through placement of conditions of approval on applicable projects, to reduce impacts to a less than significant level.

Mitigation Measures

MM B-3: The lead agency of a particular RTP project with potentially significant conflicts with an HCP shall ensure that the project complies with applicable mitigation and fees, as outlined in the HCP, and further, that the project-specific environmental review considers specific mitigation measures and/or alternative alignments that avoid or minimize conflicts with applicable HCPs and the protected species and habitats thereof.

Compliance with the above mitigation measure would ensure that impacts related to HCP areas would be reduced to a **less than significant** level.

3.4 GREENHOUSE GAS EMISSIONS/CLIMATE CHANGE

This section of the Draft Environmental Impact Report (Draft EIR; DEIR) addresses climate change, greenhouse gas emissions and climate change implications at the global, state, and regional level, and the environmental effects associated with implementation of the proposed 2019 RTP.

3.4.1 Existing Setting

Background

The US Energy Information Administration estimates that California is the second-largest state emitter of greenhouse gas (GHG) emissions in the United States, behind Texas in absolute emissions (EIA 2015). The most significant sources of GHGs associated with global warming are carbon dioxide (CO_2) and methane (CH_4). Of these, we mostly focus on CO_2 because it constitutes the major anthropogenic (human) contribution to GHG and this is primarily via CO_2 emissions from cars and trucks.

In California, transportation accounts for the largest source of GHG, accounting for about 40.6 percent of overall gross emissions (California Energy Commission - CEC 2018). Another major source of emissions is energy production through the burning of fossil fuels. Because of rising concern over the effects of global warming, California has targeted, both, the energy and transportation sector, in efforts to reduce carbon emissions. These energy initiatives focus primarily upon achieving emission reductions through transition to renewable energy sources, coupled with increasing energy efficiency standards. Legislation directed toward transportation focuses upon reducing vehicle miles traveled (VMT) related emissions measures with the goal of reducing carbon emissions.

Senate Bill (SB) 375 requires regional transportation planning agencies to include a sustainable communities strategy (SCS) in their regional transportation plans. These plans must include land use, housing, and transportation strategies. Implicit in this legislation is recognition of the nexus between transportation planning and land use. In the simplest terms, where people live and work influences how far and how often they drive, which translates to vehicle miles traveled.

Greenhouse Gas Emissions and Climate Change

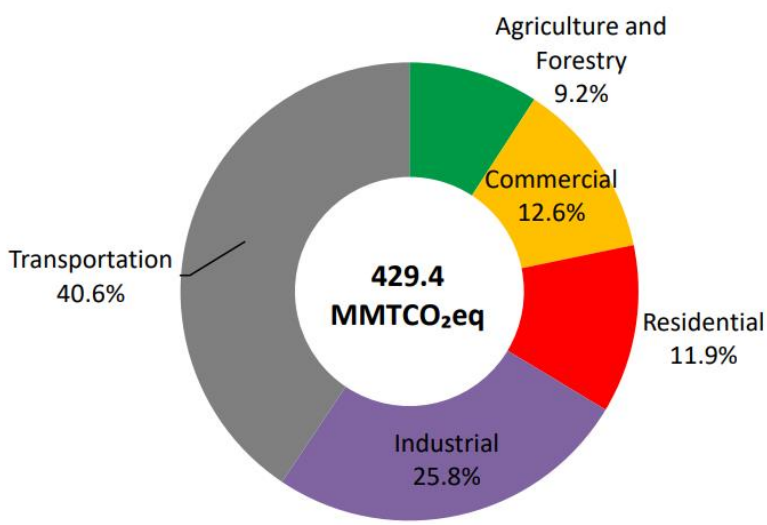
The temperature on earth is regulated by this greenhouse effect, which is so named because the earth's atmosphere acts like a greenhouse, warming the planet in much the same way that an ordinary greenhouse warms the air inside its glass walls. Like glass, the gases in the atmosphere let in light yet prevent heat from escaping.

Greenhouse gases are naturally occurring gases such as water vapor, carbon dioxide (CO_2) and methane (CH_4), and nitrous oxide (N_2O) that absorb heat radiated from the earth's surface. GHGs — CO_2, CH_4, N_2O, and others — are transparent to certain wavelengths of the

sun's radiant energy, allowing them to penetrate deep into the atmosphere or all the way to the earth's surface. Clouds, ice caps, and particles in the air reflect about 30 percent of this radiation, but oceans and land masses absorb the rest (70 percent of the radiation received from the sun) before releasing it back toward space as infrared radiation. GHG and clouds effectively prevent some of the infrared radiation from escaping; they trap the heat near the earth's surface where it warms the lower atmosphere. If this natural barrier of atmospheric gases were not present, the heat would escape into space and earth's average global temperatures could be as much as 61 degrees Fahrenheit (°F) cooler (NASA 2009).

In addition to natural sources, human activities are exerting a major and growing influence on climate by changing the composition of the atmosphere and by modifying the land surface. Particularly, the increased consumption of fossil fuels (natural gas, coal, gasoline, etc.) has substantially increased atmospheric levels of greenhouse gases. Measured global GHG emissions resulting from human activities, especially the consumption of fossil fuels, have grown since pre-industrial times, with an increase of 78 percent between 1970 and 2010 (Intergovernmental Panel on Climate Change - IPCC 2018). This increase in atmospheric levels of GHG unnaturally enhances the greenhouse effect by trapping more infrared radiation as it rebounds from the earth's surface and thus traps more heat near the earth's surface. Prominent GHGs contributing to the greenhouse effect and climate change include carbon dioxide, methane, ozone (O_3), nitrous oxide, and chlorofluorocarbons (CFCs). Emissions of these gases are attributable to human activities associated with the industrial/manufacturing, utilities, transportation, residential, and agricultural sectors (CEC 2018).

Figure 3.4-1: California's 2016 Greenhouse Gas Emissions by End Use

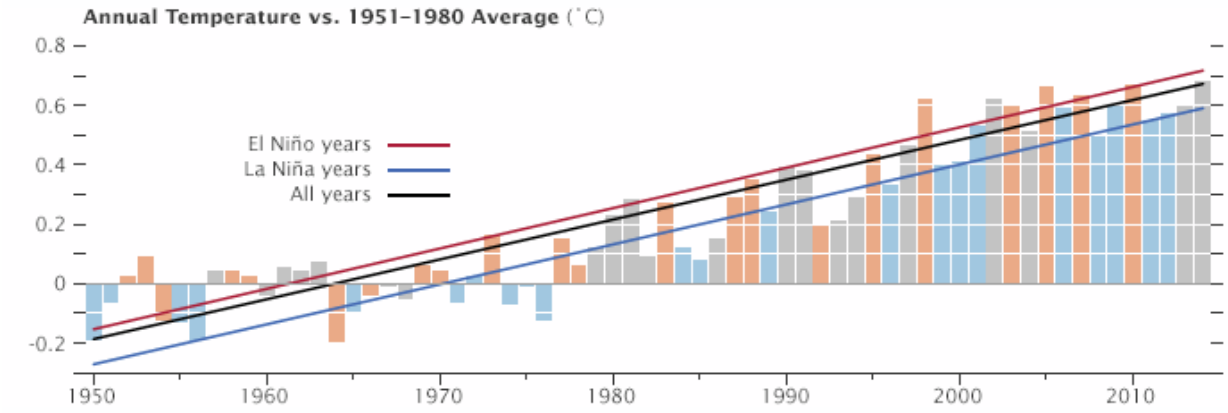


Source: California Energy Commission using data from the CARB's Greenhouse Gas Emissions Inventory – 2018 Edition and 2016 energy consumption data from the Energy Commission's California Energy Demand 2018-2028, Revised Electricity Forecast

According to an ongoing temperature analysis conducted by scientists at NASA's Goddard Institute for Space Studies (GISS), the average global temperature on Earth has increased by about 0.8° Celsius (1.4° Fahrenheit) since 1880. Two-thirds of the warming has occurred since 1975, at a rate of roughly 0.15-0.20°C per decade.

Generally, warming is greater over land than over the oceans because water is slower to absorb and release heat (thermal inertia). Warming may also differ substantially within specific land masses and ocean basins. The graph below shows the long-term temperature trends in relation to El Niño or La Niña events, which can skew temperatures warmer or colder in any one year. Orange bars represent global temperature anomalies in El Niño years, with the red line showing the longer trend. Blue bars depict La Niña years, with a blue line showing the trend. Neutral years are shown in gray, and the black line shows the overall temperature trend since 1950.

Figure 3.4-2: Annual Temperature During El Nino and La Nina Year 1951-1980



Since the year 2000, land temperature changes are 50 percent greater in the United States than ocean temperature changes; two to three times greater in Eurasia; and three to four times greater in the Arctic and the Antarctic Peninsula. Warming of the ocean surface has been largest over the Arctic Ocean, second largest over the Indian and Western Pacific Oceans, and third largest over most of the Atlantic Ocean.

Global Implications

Recognizing the problem of global climate change, the World Meteorological Organization (WMO) and the United Nations Environment Programme (UNEP) established the Intergovernmental Panel on Climate Change (IPCC) in 1988. It is open to all members of the United Nations and WMO. The role of the IPCC is to assess on a comprehensive, objective, open, and transparent basis the scientific, technical, and socioeconomic information relevant to understanding the scientific basis of risk of human-induced climate change, its potential impacts, and options for adaptation and mitigation.

Surface temperature is projected to rise over the 21st century under all assessed emission scenarios. It is very likely that heat waves will occur more often and last longer, and that extreme precipitation events will become more intense and frequent in many regions. The ocean will continue to warm and acidify, and global mean sea level to rise. IPCC projects that the earth's average surface temperature should rise 1.8°F to 7.2ºF before the year 2100 (IPCC 2014).

The Intergovernmental Panel on Climate Change - IPCC Climate Change 2014 Synthesis Report and Fifth Assessment Report of the Intergovernmental Panel on Climate Change synthesizes current scientific understanding of global climate change and projects future climate change using the most comprehensive set of well-established global climate models. The Office of Environmental Health Hazard Assessment 2018 Report indicators of Climate Change in California incorporates findings of the current effects of global climate change.

These findings include:

- Average temperatures have increased by about 1.8 degrees Fahrenheit in California over the past century. Increases in minimum and maximum temperatures were 2.2°F and 1.3°F, respectively.
- Over the past 120 years, California has become increasingly dry. The most recent drought from 2012 to 2016 was the most extreme since instrumental records began.
- With increasing temperatures, the energy needed to cool buildings during warm weather—measured by "cooling degree days"—has increased.
- Extreme heat days and especially nights have become more frequent since 1950. Heat waves have been highly variable each year, but nighttime heat waves have shown a marked increase since the mid-1970s.
- Glaciers in the Sierra Nevada have decreased in area dramatically. By 2014, several of the largest glaciers were on average about half their size at the beginning of the twentieth century.
- The amount of water stored in the state's snowpack has been highly variable from year to year, dropping to a record low in 2015, about 5 percent of the historical average. Snowmelt runoff during April through July has declined over the past century.
- The area burned by wildfires across the state is increasing in tandem with rising temperatures. Large wildfires account for much of the acreage burned each year.
- Over the past 80 years, California's forests have been changing in response to decreasing water availability, driven by warmer temperatures. Small trees and oaks have increased, while pines have decreased.
- Sea levels along the California coast have risen overall, except at one location where uplift of the land surface has occurred due to the movement of the Earth's plates.

At a more local level, the California Climate Action Team found that California-specific models estimate an average warming increase of 2.7 to 10.5ºF throughout California before the year 2100 (CAT, 2009).

An enhanced greenhouse effect will generate new patterns of microclimate and may have significant impacts on the economy, environment, and transportation infrastructure and operations due to increased temperatures, intensity of storms, sea level rise, and changes in precipitation. Impacts may include flooding of tunnels, coastal highways, runways, and railways, buckling of highways and railroad tracks, submersion of dock facilities, and a shift in agriculture to areas that are now cooler. Such prospects will have strategic, security, and transportation implications.

Climate change affects public health and the environment. Increased smog and emissions, respiratory disease, reduction in the state's water supply, extensive coastal damage, and changes in vegetation and crop patterns have been identified as effects of climate change. The impacts of climate change are broad-ranging and interact with other market failures and economic dynamics, giving rise to many complex policy problems. The findings are the latest in a string of reports warning that the rate of carbon dioxide accumulating in the atmosphere is increasing at an alarming pace.

California Implications

Climate change and global warming could negatively affect agriculture, forestry, water resources, coastal areas, energy production, air quality, public health, public infrastructure, natural protections, sensitive species and habitats, public safety, and the economy (CAT 2009). The estimated economic value of shoreline development that could be impacted by a 55-inch rise in sea level is $62 billion. As the existing climate throughout California changes over time, mass migration of species, or worse, failure of species to migrate in time to adapt to the perturbations in climate, could also result.

Emergency Management

According to the United Nation's Intergovernmental Panel on Climate Change (the international body for assessing climate change and science), climate change will continue to increase the frequency and severity of extreme weather events. Extreme weather is defined as events, such as droughts or floods, that have historically occurred on average only once in 100 years and vary from "the norm" in severity or duration. California is currently experiencing unprecedented impacts from extreme weather. Severe drought, which started in 2011-12, was intensified by the driest four-year statewide precipitation on record (2012-2015) and the smallest and second smallest recorded Sierra snowpack (2015 and 2014). Further, 2014, 2015, and 2016 were the warmest years on average.

In contrast, 51 out of 58 counties declared states of emergencies during the 2017 Winter Storms for flooding, which resulted in three federal disaster declarations. Record breaking wildfires also continue to impact California with increasing frequency, size, and devastation.

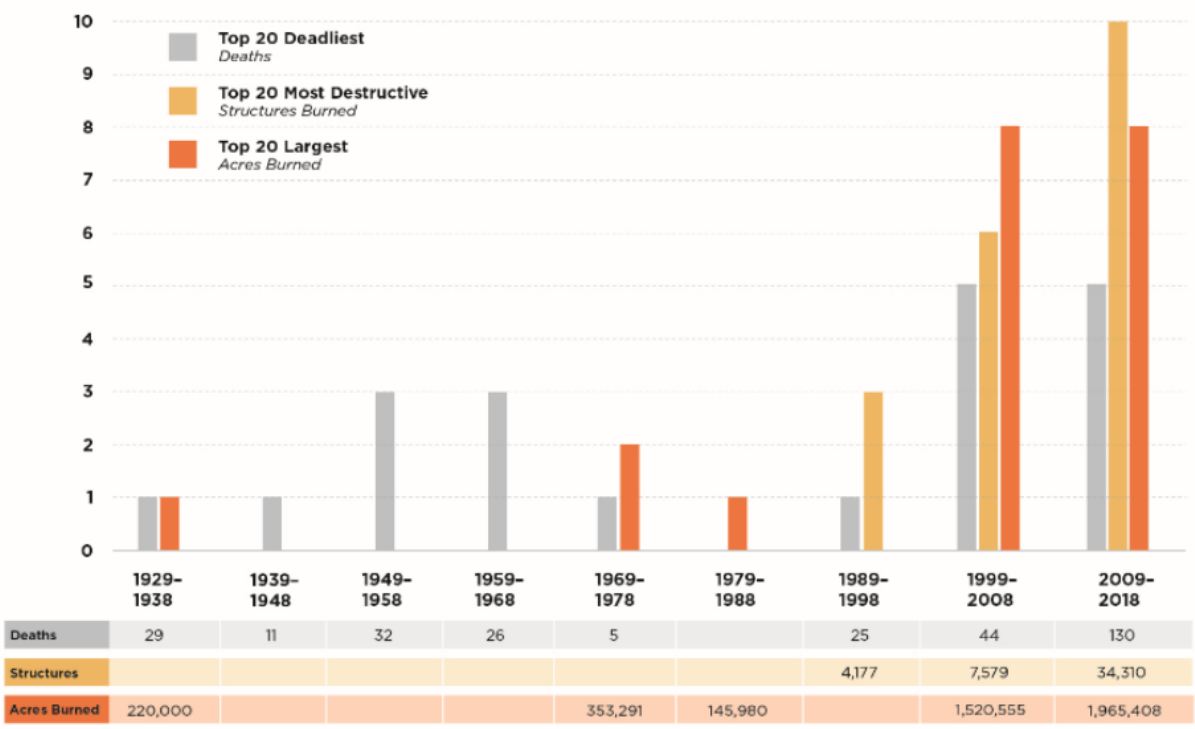
Two of the three largest wildfires in California's history have occurred in the past five years, burning a total of 529,225 acres.

In 2015 alone, two of the top ten most destructive wildfires in California's history occurred. Climate change is anticipated to increase and exacerbate these and other hazards, including extreme heat events, sea level rise, tsunamis, and flooding associated with atmospheric rivers, like those experienced in the 2017 winter storms, as well as slower onset changes like rising temperatures which have additional impacts (e.g., increasing the severity of extreme heat events and wildfires). Climate change impacts emergency preparedness, response, and recovery; therefore, it is critical to ensure community resilience against its effects.

Wildfire Risk

There is growing international recognition that greenhouse gas emissions are changing the climate with wide-ranging impacts. California is vulnerable to a variety of climatic changes, including changes in temperature and precipitation patterns, extreme events (including wildfire, inland and coastal flooding, and heat waves), and sea-level rise. Higher temperatures are likely to exacerbate future droughts like the one California experienced from fall 2011 to fall 2015 and to increase wildfire risk. More than 100 million drought-stressed trees died as result of bark beetle infestation since 2010. Five of the deadliest, seven of the most destructive (in terms of structures destroyed), and four of the largest wildfires in California's history occurred in 2017 and 2018 alone, with some fires making the top 20 list in more than one category. The 2018 Camp Fire in Butte County was by far the deadliest and most destructive in California's history, killing 86 people and destroying about 18,800 structures, almost 14,000 of which were residences. The following Figure shows the 20 largest, deadliest, and most destructive California wildfires since 1929, clearly indicating the increasing toll from wildfires.

Figure 3.4-3: The Largest, Most Destructive, and Deadliest California Wildfires in the Last Century



Source: California Energy Commission using data from http://cdfdata.fire.ca.gov/incidents/incidents_statsevents dated 12/12/2018. 1

Summary information available at http://www.climateassessment.ca.gov/state/docs/20180827- StatewideSummary.pdf.

For more complete information on the California's Fourth Climate Change Assessment please go to http://www.climateassessment.ca.gov

California Department of Forestry and Fire Protection (CAL FIRE), Camp Fire Incident Report, Updated 12/14/2018.

California's 33 million acres of forestland and an urban forest canopy capture and clean our water supply, provide habitat for countless wildlife, cool our cities, support local economies, and serve as spiritual and cultural centers for indigenous and local communities across the state. Forested lands also are the state's largest land-based carbon sink, drawing carbon from the atmosphere and storing it in wood and in forest soils. Growing evidence, however, suggests forests will become a source of overall net carbon emissions if actions are not taken

to enhance their health and resilience and to reduce the threats they face from wildfire, insects, disease, and a changing climate.

The Regional Forest and Fire Capacity Program seeks to increase regional capacity to prioritize, develop, and implement projects that improve forest health and fire resilience, facilitate greenhouse gas emissions reductions, and increase carbon sequestration in forests throughout California. Block grants will be utilized by recipients to support regional implementation of landscape-level forest health projects consistent with the California Forest Carbon Plan and Executive Order B-52-18.

Response to these threats is guided by the California Forest Carbon Plan that was developed by the Forest Climate Action Team—composed of state, federal, and local agency representatives—under the leadership of the California Natural Resources Agency, California Environmental Protection Agency, and the Department of Forestry and Fire Protection and recommends:

- Significantly increase the pace and scale of forest and watershed improvements on nonfederal forest lands through incentives and other mechanisms.
- Support Federal goals and actions to improve forest and watershed health and resiliency on Federal lands.
- Prevent forest land conversions through easements and acquisitions, as well as land use planning.
- Innovate solutions for wood products and biomass utilization to support ongoing sustainable forest management activities.
- Protect and enhance the carbon sequestration potential and related benefits of urban forests.
- Support key research, data management, and accountability needs.

Links:
California Forest Carbon Plan PDF
California Forest Carbon Plan one-page summary

Climate change research predicts increased numbers and acres of wildfire. Wildfire occurrence statewide could increase from 57 percent to 169 percent by 2085 and by more than 100 percent in most northern California forests (California Natural Resources Agency 2009). Fire severity is also predicted to increase as a result of more frequent severe fire weather. The wildfire season already appears to be starting sooner, lasting longer, and increasing in intensity (California Natural Resources Agency 2009). Burned wildland acreage has increased in the last several decades. Over 48 million acres, or nearly half of the state, is at a high to extreme level of fire threat (California Natural Resources Agency 2009).

Increases in the frequency and intensity of wildfires will make forests more susceptible to vegetation conversions from trees to brush or grasslands (California Natural Resources Agency 2009). In order for trees to reestablish after wildfires, patches of living trees must be

left to provide seeds for the recruitment of new seedlings. As wildfires increase in size, they can result in "stand-replacing" burns that are too big for natural regeneration. More frequent fires may also result in vegetation conversion by repeatedly killing regeneration. Vegetation conversions of chaparral and forest vegetation will impact biodiversity, habitats, watershed conditions, timber resources, and other goods and services.

In San Luis Obispo County, the annual percentage of the County burned by wildfire is expected to increase from a historical average of 3/7% to 6.8-7.3% by 2035-45 and 8.1-8.5% by 2075-85. This translates to up to 311 square miles burned, on average, per year. Similarly, also projected is substantial increases in area burned by wildfire, with much of San Luis Obispo County expected to experience 200-350% increase in acreage burned by 2085 as compared to the historic (1961-1990) amount (National Center for Conservation Science and Policy - 2010)

Agriculture

Potential impacts, such as reduced water supply, more severe droughts, more winter floods, and drier growing seasons, will affect California's agriculture. Many farms, especially in the fruit and nut business, require long-term investments, making fast adaptation difficult, and could thus experience serious losses if decisions continue to be made with no regard to expected climate changes.

Fishing

In California, warmer than normal ocean temperatures mean fishes normally found off Mexico, such as yellowfin tuna and dorado, are more common off southern California. However, bait, such as anchovy and squid, may travel to the north, and some game fish, such as white seabass and California halibut, may follow them.

Studies found that as a result of changes in ocean conditions, the distribution and abundance of major fish stocks will change substantially. Impacts to fisheries related to El Niño/Southern Oscillation illustrate how climate directly impacts marine fisheries on short-term scales. Higher sea surface temperatures in 1997–1998 during the El Niño had a great impact on market squid, California's largest fishery by volume. The California Regional Assessment reports that landings fell to less than 1,000 metric tons in that season, down from 110,000 tons in the 1996–1997 season. Other unusual events also occurred such as poor salmon returns, a series of plankton blooms, and seabird die-offs.

Coastline

With climate changes, recreational facilities and developed coastlines will also be more vulnerable to hurricanes, storm surges, and flooding. Increasing population growth in coastal areas is a reason for further concern, since these areas could be more vulnerable to climate change impacts. Impacts of expected sea level rise and increased storm surges are numerous. Beachfront homes and harbors as well as wetlands may flood. Sewage systems may be overwhelmed by storm runoff and high tides.

Sea Level Rise

The nearest, long-term sea level record in proximity to the study area is the Port San Luis tide gage (Station 9412110) operated by the National Oceanic and Atmospheric Administration (NOAA). The gage is located on the Harford Pier, which has been collecting data since 1948.

Sea Level Rise projections used in the Community Baseline Assessment (CBA) used projections from "Sea-Level Rise for the Coasts of California, Oregon, and Washington" (NRC 2012). The study used the high range for each of the horizon years as a conservative measure.

A new scientific study titled "Rising Seas in California – An Update on Sea-Level Rise Science" (OPCSAT 2017) for the State of California suggests the potential for higher Sea Level Rise projections than NRC 2012 by the year 2100 and beyond timescales.

Figure 3.4-4: Sea Level Rise Projections in San Luis Obispo County

Year	Projected Sea Level Rise (ft)	Projection Uncertainty (ft, +/-)	Low Range (ft)	High Range (ft)
2030	0.5	0.2	0.2	1.0
2050	0.9	0.3	0.4	2.0
2100	3.1	0.8	1.5	5.5

(Source: National Research Council 2012

Mapped areas of potential flooding, erosion, and wetland migration depicting San Luis Obispo County can be found in **Volume II, Technical Appendices**. Substantial areas of the coast are at risk of erosion, including Morro Rock Beach and Avila Beach. The GIS assessment of sea level rise is a valuable first step toward identifying areas at risk along the coast.

Ecosystems

The current distribution, abundance, and vitality of species and habitats are strongly dependent on climatic (and microclimatic) conditions. Climate change is expected to result in warmer temperatures year-round, accompanied by substantially wetter winters. Rising sea level will significantly affect coastal wetlands because they are mostly within a few feet of sea level. As the sea rises, these wetlands will move inland. The overall acreage of wetlands will be reduced due to constraints by existing urban development and steeper slopes immediately inland of existing wetlands. Tidal rivers, estuaries, and relatively flat shoreline habitats will be more subject to damage by flooding and erosion. More severe storm surges from the ocean, due to higher sea levels, combined with higher river runoff could significantly increase flood

levels by more than the rise in sea level alone. Erosion of beaches would decrease habitat for beach-dependent species, such as seals, shorebirds, and endangered species (for example, snowy plover and least tern).

The timing and amounts of water released from reservoirs and diverted from streams are constrained by their effects on various native fish, especially those that are listed under the federal and state endangered species acts as threatened or endangered. Several potential hydrological changes associated with global climate change could influence the ecology of aquatic life in California and have several negative effects on cold-water fish (DWR 2006). For example, if climate change raises air temperature by just a few degrees Celsius, this change could be enough to raise the water temperatures above the tolerance of salmon and trout in many streams, favoring instead non-native fishes such as sunfish and carp (DWR 2006). Unsuitable summer temperatures would be particularly problematic for many of the threatened and endangered fish that spend summers in cold-water streams, either as adults or juveniles or both (DWR 2006). In short, climate change could significantly affect threatened and endangered fish in California. It could also cause non-threatened and non-endangered fish to reach the point where they become designated as such (DWR 2006).

Changes in temperature and precipitation patterns would also shift California's current climate zones, and thus habitats associated with these zones, northward by approximately 100 to 400 miles, as well as upwards in elevation by 500 to 1,500 feet. Global climate change would alter the composition, structure, and arrangement of the vegetation cover of the state (forest and wildland). Species distribution would move geographically as the climate changes, with forest stands, woodlands, and grassland species predicted to move northward and higher in elevation. The entire vegetative community may be affected if non-native invasive species occupy sites and replace native plants. Outbreaks of insects and diseases could compromise forest health and the capability of the forest stands to reproduce and to store carbon on a landscape basis. Forest fires are likely to become more frequent and severe if soils become drier. Changes in pest populations could further increase the stress on forests.

Water Supply

The state's water supply system already faces challenges to provide water for California's growing population. Climate change is expected to exacerbate these challenges through increased temperatures and possible changes in precipitation patterns. The trends of the last century, especially increases in hydrologic variability, will likely intensify in this century (California Natural Resources Agency 2009). Californians can expect to experience more frequent and larger floods and deeper droughts. Increasing average temperatures may have several impacts on water supply and demand, affecting California's farms, municipalities, and ecosystems.

San Luis Obispo County obtains nearly 80 percent of its water supply from groundwater. Only 2 percent of the county's supply comes from imported water and the remaining 17 percent of water supply comes from surface waters (San Luis Obispo County 2010). In the

late 1980s, a drought brought increased awareness of groundwater issues in the county. Due to a lack of surface water supplies at the time, the county was forced to rely more heavily on groundwater supplies, drawing attention to the risks associated with this choice of water supply, particularly in coastal areas. Many of the county's coastal communities are facing existing or potential seawater intrusion in their groundwater sources. This issue is particularly acute in the Los Osos Valley, Cambria, and the Nipomo areas.

Concerns over the availability, quality, and distribution of water are becoming more complex with the possibility of reduced future water supplies and increased flood threat brought about by climate change.

Increased Flooding

Currently, no information is available to accurately assess the impact of climate change for flood frequency or severity, because of the absence of detailed regional precipitation information from climate models and because water management choices can substantially influence overall flood risk. However, increased amounts of winter runoff could be accompanied by increases in flood event severity and warrant additional dedication of wet season storage space for flood control as opposed to water supply storage. This need to manage water storage facilities to handle increased runoff could in turn lead to water shortages during high water demand. It is recognized that these impacts would result in increased challenges for reservoir management and balancing the competing concerns of flood protection and water supply.

Sudden Climate Change

Most global climate models project that anthropogenic climate change will be a continuous and fairly gradual process through the end of this century (DWR 2006). California is expected to be able to adapt to the water supply challenges posed by climate change, even in some of the warmer and drier projections for change. Sudden and unexpected changes in climate, however, could leave water managers unprepared and could, in extreme situations, have significant implications for California and its water supplies. For example, there is speculation that some of the recent droughts that occurred in California and the western United States could have been due, at least in part, to oscillating oceanic conditions resulting from climatic changes. The exact causes of these events are, however, unknown, and evidence suggests such events have occurred during at least the past 2,000 years (DWR 2006).

RTP Implications

A major challenge in San Luis Obispo County, as elsewhere, is the disparity between where people live and where they work (e.g.; the "jobs/housing balance). Therefore, the RTP proposes to improve the jobs-housing imbalance and allocates more housing as compact (which includes Single Family homes on lots sized up to 6,000 sq. ft.) in existing urban areas to balance both growth and conservation and to reduce the annual greenhouse gas emissions

produced in the county. At the same time, the RTP incorporates a number of strategies aimed at increasing transit and alternative modes.

The 2010 included a "Preliminary" SCS and the 2014 RTP included an SCS to meet the California Air Resources Board (CARB) GHG reduction targets. The proposed 2019 RTP also includes an SCS that meets CARB's reduction targets established in 2018 for the region under SB 375. The proposed RTP includes projects for bus transit, bicycling and walking, as well as transportation demand management and road improvement projects.

The 2019 Regional Transportation Plan will affect the amount of greenhouse gas emissions caused by on-road vehicle travel. The following is a summary of existing estimates of GHG emissions from on-road vehicle travel in San Luis Obispo County. On-road transportation includes passenger car and truck travel along local roads and state highways.

California Emissions

The California Air Resources Board (CARB) compiles GHG inventories for the State of California. Based on the 2017 GHG inventory data (i.e., the latest year for which data are available), California emitted 440 MMTCO2e including emissions resulting from imported electrical power in 2015. Based on the GHG inventories compiled by the World Resources Institute, California's total statewide GHG emissions rank second in the US (Texas is number one with 874 MMTCO2e) with emissions of 455 MMTCO2e in 2017.

The primary contributors to GHG emissions in California are transportation, electric power production from both in-state and out-of-state sources, industry, agriculture and forestry, and other sources, which include commercial and residential activities. The figure below provides a summary of GHG emissions reported in California in 2000 and 2015 separated by categories defined by the United Nations Intergovernmental Panel on Climate Change (IPCC).

Figure 3.4-5: GHG Emissions in California

Source Category	2000 ($MMTCO_2e$)	Percent of Total	2015 ($MMTCO_2e$)	Percent of Total
ENERGY	408.90	87.52%	365.6	83.02%
Energy Industries	159.12	--	132.93	--
Manufacturing Industries & Construction	22.75	--	19.98	--
Transport	175.29	--	163.64	--
Other Sectors (Residential/Commercial/Institutional)	44.67	--	40.33	--
Solid Fuels	0.04	--	0.01	--
Fugitive Emissions from Oil & Natural Gas	5.78	--	7.51	--
Fugitive Emissions from Geothermal Energy Production	1.13	--	1.15	--
Pollution Control Devices	0.11	--	0.00	--
INDUSTRIAL PROCESSES & PRODUCT USE	19.60	4.20%	32.5	7.38%
Mineral Industry	5.60	--	5.23	--
Chemical Industry	0.06	--	0.03	--
Non-Energy Products from Fuels & Solvent Use	2.46	--	1.90	--
Electronics Industry	0.52	--	0.26	--
Substitutes for Ozone Depleting Substances	6.10	--	18.37	--
Other Product Manufacture and Use	1.52	--	1.39	--
Other	3.31	--	5.26	--
AGRICULTURE, FORESTRY, & OTHER LAND USE	29.40	6.29%	31.70	7.20%
Livestock	19.62	--	23.25	--
Aggregate Sources & Non-CO_2 Sources on Land	9.76	--	8.42	--
WASTE	9.30	1.99%	10.60	2.41%
Solid Waste Disposal and Biological Treatment	7.22	--	8.40	--
Biological Treatment of Solid Waste	0.13	--	0.33	--
Wastewater Treatment & Discharge	1.93	--	1.90	--
EMISSIONS SUMMARY				
Gross California Emissions	467.19		440.36	

Sources:
[1] *California Air Resources Board, "California Greenhouse Gas 2000-2015 Inventory by IPCC Category - Summary," https://www.arb.ca.gov/cc/inventory/data/tables/ghg_inventory_ipcc_sum_2000-15.pdf, 2016.*

San Luis Obispo County Emissions

Mobile source GHG emissions were quantified by SLOCOG using the EMFAC 2014 software tool. EMFAC 2014 was created and is maintained by the California Air Resources Board for local government use in calculating air pollutants and greenhouse gas emissions. The EMFAC software allowed SLOCOG to estimate the amount of carbon dioxide (CO_2) and the common criteria pollutants (but does not report Methane) resulting from vehicle miles traveled within the county. The use of EMFAC by local agencies is recommended by the State; however, it is important to note that the EMFAC methodology for calculating GHG emissions from mobile sources is different from the methodology used to calculate GHG emissions included in the California-wide GHG inventory. The State uses fuel consumption data as an indicator of GHG emissions, while counties and cities are directed to use vehicle miles traveled (VMT), which is believed to be a more accurate indicator at the local level. The EMFAC 2014 analysis calculated that on-road transportation in the county is the source of 1.2 million metric tons of CO_2, as shown in **Figure 3.4-6**.

Figure 3.4-6: San Luis Obispo 2015 Countywide Greenhouse Gas Emissions

2015 Countywide On-Road Transportation Emissions	Source	Tons Carbon Dioxide (CO_2) Equivalent per Year	Percentage of Total
Passenger Cars	VMT from light-duty autos, light-duty trucks, and medium-duty trucks	953,015	76.45%
Heavy-Duty Trucks and Other Vehicle Classes	VMT from heavy-duty trucks, motorcycles, buses, and motorhomes	293,547	23.55%
	Total	**1,246,562**	**100%**

Notes: GHG emissions were quantified by SLOCOG using the EMFAC 2014 software tool.

The Clean Air Act requires that the EPA set National Ambient Air Quality Standards (NAAQS) for six common air pollutants which are also known as criteria air pollutants which are: ozone, nitrogen dioxide, particulate matter, carbon monoxide, sulfur dioxide, and lead. The total amounts of these pollutants can be seen in the figure below, which depicts the Plan's base year of 2015 and future years out to 2045. Lead pollution is not accounted for in the figure due to lead largely being phased out of gasoline in the state of California and the overall decrease of lead pollution which came as a result. Each of the criteria pollutants demonstrates a decrease in all future years with the exception of particulate matter, which levels off after 2035. Overall the criteria pollutants per capita decrease in each future year.

Figure 3.4-7: San Luis Obispo County Criteria Pollutants (2015-2045)

CRITERIA POLLUTANTS	2015	2020	2035-S3	2045
Ozone				
Reactive Organic Gases (ROG)	2.56	1.52	0.70	0.54
Nitrogen Dioxide (NO_2)	5.63	3.14	0.97	0.77
Particulate Matter				
PM_{10}	0.43	0.37	0.35	0.36
$PM_{2.5}$	0.21	0.16	0.15	0.15
Carbon Monoxide (CO)	19.68	10.69	4.26	3.49
Sulfur Dioxide (SO_2)	0.03	0.03	0.02	0.02
Total Pollutants (Tons per day)	**28.54**	**15.90**	**6.45**	**5.33**
Criteria Pollutants per Capita (lbs per person)	**0.21**	**0.12**	**0.04**	**0.03**

Source: SLOCOG RTP modeling data with EMFAC 2014 software

3.4.2 Regulatory Framework

International

Intergovernmental Panel on Climate Change

The World Meteorological Organization (WMO) and United Nations Environmental Program (UNEP) established the IPCC in 1988 with the goal of evaluating the risk of climate change caused by human activities. The IPCC relies on peer reviewed and published scientific literature to make policy recommendations. The IPCC reports its evaluations in assessment reports, the latest of which (i.e., Fifth Assessment Report), was published in 2013. In its 2013 report, the IPCC stated that global temperature increases since 1951 were extremely likely attributable to man-made activities (greater than 95 percent certainty (https://www.ucsusa.org/global-warming/science-and-impacts/.../ipcc-backgrounder.ht).

Paris Accord

The most recent international climate change agreement was adopted at the United Nations Framework Convention on Climate Change in Paris in December 2015 (the "Paris Accord"). In the Paris Accord, the United States set its intended nationally determined contribution to reduce its GHG emissions by 26 to 28 percent below its 2005 level in 2025 and to make best efforts to reduce its emissions by 28 percent. These targets were set with the goal of limiting global temperature rise to below 2 degrees Celsius and getting to the 80 percent emission reduction by 2050. However, in June 2017, the U.S. announced its intent to withdraw from the Accord. The earliest effective date of a withdrawal by the U.S. is November 2020.

Federal

Greenhouse Gases

Federal efforts to address climate change began in 2007 with EPA's attempts to regulate GHG emissions under the Clean Air Act. The U.S. Supreme Court ruled on April 2, 2007, that CO_2 is an air pollutant as defined under the CAA, confirming EPA's authority to regulate emissions of GHGs. EPA followed with a finding in 2009, declaring that greenhouse gases endanger public health and welfare under the Clean Air Act (http://elawreview.org/articles/volume-40/issue-40-4/federal-control-of-greenhouse-gas-emissions/).

The Obama Administration, through EPA and the National Highway Transportation Safety Administration (NHTSA), took additional steps to regulate national greenhouse gas emissions, focusing improving the fuel economy for passenger cars and light-duty trucks beginning with model year 2012 (USEPA 2010c).

More recently, these efforts were reinforced when in January 2017, EPA Administrator Gina McCarthy issued a determination maintaining the GHG emissions standards for model year MY 2022-2025 vehicles. However, under the Trump Administration, former EPA

Administrator Scott Pruitt and Department of Transportation Secretary Elaine Chao reversed the trend toward regulating GHGs, issuing a Final Determination which finds that the model year 2022-2025 greenhouse gas standards are not appropriate in light of the record before EPA and, therefore, should be revised (https://fas.org/sgp/crs/misc/R45204.pdf)

State

Assembly Bill 1493

Assembly Bill (AB) 1493 (Pavley) of 2002 requires CARB to develop and adopt the nation's first GHG emission standards for automobiles. These standards are also known as "Pavley I." The California Legislature declared in AB 1493 that global warming is a matter of increasing concern for public health and the environment.

Assembly Bill 32, the California Global Warming Solutions Act of 2006

AB 32, passed in 2006, requires California to lower statewide GHG emissions to 1990 levels by 2020. Under AB 32, the California Air Resources Board (CARB) was to develop specific early actions and a scoping plan to reduce GHG. The gases that are regulated by AB 32 include CO_2, CH_4, N_2O, hydrofluorocarbons, perfluorocarbons, and sulfur hexafluoride. The reduction to 1990 levels will be accomplished through an enforceable statewide cap on GHG emissions that will be phased in starting in 2012. To effectively implement the cap, AB 32 directs CARB to develop and implement regulations to reduce statewide GHG emissions from stationary sources. AB 32 specifies that regulations adopted in response to AB 1493 should be used to address GHG emissions from vehicles. However, AB 32 also includes language stating that if the AB 1493 regulations cannot be implemented, then CARB should develop new regulations to control vehicle GHG emissions under the authorization of AB 32.

Senate Bill 375

Senate Bill 375, passed in 2008, supports implementation of AB 32 and aims to reduce statewide GHG emissions through regional transportation planning, including consideration of global warming in that planning process. Specifically, SB 375 requires metropolitan planning agencies (MPOs) to include a sustainable communities strategy (SCS) in their regional transportation plans, incorporating most recent CARB GHG emission reduction targets.

On December 14, 2017, CARB approved the final version of *California's 2017 Climate Change Scoping Plan* (2017 Scoping Plan Update), which outlines the proposed framework of action for achieving the SB 32 2030 GHG target of 40 percent reduction in GHG emissions relative to 1990 levels.

CARB just recently updated the GHG targets in 2018. The CARB set 2020 target for this region is a 3% reduction. The 2035 target is now are 11%.

These plans must include land use, housing, and transportation strategies. This legislation reflects the nexus between transportation planning and land use. In the simplest terms, where people live and work largely influences how far and how often they drive, which translates to vehicle miles traveled.

Executive Order B-16-12

In March 23, 2012, Governor Brown issued Executive Order B-16-2012 to encourage zero-emission vehicles (ZEVs) and related infrastructure. It orders CARB, CEC, CPUC, and other relevant agencies to work with the Plug-in Electric Vehicle Collaborative and the California Fuel Cell Partnership to establish benchmarks concerning ZEVs. By 2020, the state's ZEV infrastructure should support up to one million vehicles. By 2025, Executive Order B-16-2012 aims to put over 1.5 million ZEVs on California roads and displace at least 1.5 billion gallons of petroleum. The Executive Order also directs state government to begin purchasing ZEVs. In 2015, 10 percent of state departments' light-duty fleet purchases must be ZEVs, climbing to 25 percent of light-duty fleet purchases by 2020. Executive Order B-16-2012 sets a target for 2050 to reduce GHG emissions in the transportation sector by 80 percent below 1990 levels.

Senate Bill 32 (SB 32) and AB 197

On September 8, 2016, California signed into law Senate Bill 32 (SB 32), which adds Section 38566 to the Health and Safety Code and requires a commitment to reducing statewide GHG emissions by 2020 to 1990 levels and by 2030 to 40 percent less than 1990 levels. SB 32 was passed with companion legislation AB 197 Chapter 250, Statutes of 2016), which provides greater legislative oversight of CARB's GHG regulatory programs, requires CARB to account for the social costs of GHG emissions, and establishes a legislative preference for direct reductions of GHG emissions.

In November 2017, CARB adopted California's 2017 Climate Change Scoping Plan (2017 Update), which outlines the proposed framework of action for achieving California's SB 32 2030 GHG target: a 40 percent reduction in GHG emissions by 2030 relative to 1990 levels. The 2030 target is intended to ensure that California remains on track to achieve the goal set forth by E.O. B-30-15 to reduce statewide GHG emissions by 2050 to 80 percent below 1990 levels.

The 2017 Update identifies key sectors of the implementation strategy, which includes improvements in low carbon energy, industry, transportation sustainability, natural and working lands, waste management, and water. Through a combination of data synthesis and modeling, CARB determined that the target statewide 2030 emissions limit is 260 MMTCO2e, and that further commitments will need to be made to achieve an additional reduction of 50 MMTCO2e beyond current policies and programs. Key elements of the 2017 Update include a proposed 20 percent reduction in GHG emissions from refineries and an expansion of the Cap-and-Trade program to meet the aggressive 2030 GHG emissions goal and ensure achievement of the 2050 limit set forth by E.O. B-30-15. For the transportations sector, the

2017 Update indicates that while most of the GHG reductions will come from technologies and low carbon fuels, a reduction in the growth of vehicle miles traveled (VMT) is also needed. The 2017 Update indicates that stronger SB 375 GHG reduction targets will enable the State to make significant progress toward this goal, but alone will not provide all of the VMT growth reductions that will be needed. It notes that there is a gap between what SB 375 can provide and what is needed to meet the State's 2030 and 2050 goals.

The 2017 Update recommends that local governments consider policies to reduce VMT, including: land use and community design that reduces VMT; transit-oriented development; street design policies that prioritize transit, biking, and walking; and increasing low carbon mobility choices, including improved access to viable and affordable public transportation and active transportation opportunities.

Executive Order S-13-08

On April 29, 2015, Governor Brown issued Executive Order B-30-15. Therein, the governor directed the following:

- Established a new interim statewide reduction target to reduce GHG emissions to 40 percent below 1990 levels by 2030 (subsequently codified in SB 32).
- Ordered all state agencies with jurisdiction over sources of GHG emissions to implement measures to achieve reductions of GHG emissions to meet the 2030 and 2050 reduction targets.
- Directed CARB to update the Climate Change Scoping Plan to express the 2030 target in terms of million metric tons of CO2 equivalent.

Senate Bill 350

Known as the Clean Energy and Pollution Reduction Act of 2015, SB 350 (Chapter 547, Statutes of 2015) was approved by Governor Brown on October 7, 2015. SB 350 will: (1) increase the standards of the California RPS program by requiring that the amount of electricity generated and sold to retail customers per year from eligible renewable energy resources be increased to 50 percent by December 31, 2030; (2) require the State Energy Resources Conservation and Development Commission to establish annual targets for statewide energy efficiency savings and demand reduction that will achieve a cumulative doubling of statewide energy efficiency savings in electricity and natural gas final end uses of retail customers by January 1, 2030; and (3) provide for the evolution of the Independent System Operator (ISO) into a regional organization;. Among other objectives, the Legislature intends to double the energy efficiency savings in electricity and natural gas final end uses of retail customers through energy efficiency and conservation.

SB 1383-Short Lived Climate Pollutants

Short-lived climate pollutants (SLCP) SLCPs include black carbon (soot), methane, and fluorinated gases (F-gases). SB 1383 of 2016 (Chapter 395, Statutes of 2016) sets forth legislative direction for control of SLCPs. It requires CARB, no later than January 1, 2018, to approve and begin implementing its SLCP strategy to achieve the following reductions in

emissions by 2030 compared to 2013 levels: methane by 40 percent, hydrofluorocarbons by 40 percent, and black carbon (non-forest) by 50 percent. The bill also specifies targets for reducing organic waste in landfills. SB 1383 also requires CARB to adopt regulations to be implemented on or after January 1, 2024 specific to the dairy and livestock industry, requiring a 40 percent reduction in methane emissions below 2013 levels by 2030, if certain conditions are met. Lastly, the bill requires CalRecycle to adopt regulations to take effect on or after January 1, 2022 to achieve specified targets for reducing organic waste in landfills.

Local

San Luis Obispo County Air Pollution Control District (SLOAPCD)

Greenhouse gases (CO_2 and CH_4) from all projects subject to CEQA must be quantified and mitigated, per California Office of Planning and Research (OPR) protocol. The Air District (SLOAPCD) is required to establish CEQA significance thresholds for greenhouse gas emissions from project operations. SLOAPCD has indicated that they are in the process of completing this task (PersComms February 6 and 7, 2019).

Local government is California have been taking the voluntary initiative of developing Climate Action Plans. These plans focus upon assessing their local GHG emissions and developing management strategies. The primary focus has been on sustainability, green design and green planning, smart growth, and green infrastructure. A major benefit realized through these efforts has been interdisciplinary collaboration within and between local agencies to address municipal and regional planning and challenges in such areas as transit and alternative modes, watershed planning, stormwater management, integrated waste management, water and energy conservation, as well as renewable energy and electric vehicles. Health related issues related issues are also at the forefront, as the nexus between land-use planning, mobility, and health determinants become increasingly apparent.

Cities in San Luis Obispo County, including the City of San Luis Obispo and Paso Robles, have also begun developing CAPs, which will be an integral part of the regions efforts to implement GHG reduction strategies. Early efforts involved a series of workshops in 2009 and 2010 to examine climate change adaptation strategies, which culminated in the issuance of a report by the organization, *Climate Wise* (https://climatewise.org/projects/829-san-luis-obispo).

San Luis Obispo Council of Governments (SLOCOG)

SLOCOG has participated in the SB 375 GHG reduction target setting process in coordination with planning staff from member jurisdictions, CARB staff, and planning and technical staff from other MPOs. The most recent update set GHG per capita reduction targets at 3% and 11% for 2020 and 2035, respectively, relative to 2005.

SLOCOG staff developed a single 2020 land use scenario for the RTP. Four alternatives were developed for 2035: two using the 2050 Regional Growth Forecast for jobs and housing distribution and two using a jobs-housing balance distribution coupled with a progressive

intensification of mix of housing types (large lot vs small lot). Scenario 2 is the most reflective of the 2014 RTP distribution. Scenario 3 used a jobs-housing balance distribution and is the preferred growth scenario of the RTP. A single 2045 scenario was developed that continued the same framework and extrapolated growth beyond the 2035 Scenario 3. The 2019 RTP Stakeholder Group and SLOCOG Board recommended the 2035 Scenario 3 as the preferred growth scenario, and could achieve the GHG reduction targets.

The 2035 preferred growth scenario produced a 11 percent reduction in GHG emissions per capita over the 2005 base year (9.2% -inclusive of the EMFAC tool adjustment factor- based on 18.9 to 17.9 pounds of CO_2 per capita plus a 1.8% reduction through off-model tools), while the 2035 Scenario 2 produces a 4.9 percent reduction in CO_2 per capita over the 2005 base year (-inclusive of the EMFAC tool adjustment factor- based on 18.9 to 18.7 pounds of CO_2 per capita and not inclusive of off model tool calculations). The 2020 growth scenario produces a 4.9 percent reduction in CO_2 emissions per capita over the 2005 base year (-inclusive of the EMFAC tool adjustment factor- based on 18.9 to 18.5 pounds of CO_2 per capita). Volume II, Appendix C: The 2019 RTP's Appendix C-Modeling and Technical Documents contains additional details.

3.4.3 Impacts and Mitigation Measures

Standards of Significance

Per Appendix G of the California Environmental Quality Act (CEQA) Guidelines and SLOAPCD standards, impacts related to climate change are considered significant if implementation of the proposed project would result in any of the following:

a) Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment.

b) Conflict with any applicable plan, policy, or regulation of an agency adopted for the purpose of reducing the emissions of greenhouse gases.

The analysis of anticipated GHG emissions resulting from implementation of the RTP project compares baseline conditions (year 2005 conditions) to the potential growth scenarios in future years 2020 and 2035.

CARB's most recent update set GHG per capita reduction targets at 3% and 11% for 2020 and 2035, respectively, relative to 2005 for the San Luis Obispo region. Thus, the analysis compares base year (2005) emissions with projected 2020 and 2035 future years. The intent of the analysis is to determine if net increases in GHG per capita emissions will occur. In addition, the analysis considers whether the project would conflict with GHG reduction targets and goals proposed by SLOCOG as part of compliance with SB 375, a component of the AB 32 Scoping Plan as described above.

Methodology

GHG emissions were quantified by SLOCOG using EMFAC 2014. EMFAC 2014 was the final step of a multi-step process to calculate changes in vehicle miles traveled (VMT) and GHG from the base year for several land use and infrastructure improvement scenarios. The EMFAC model was used in conjunction with the regional land use and traffic models and was adjusted for the VMT scenarios to estimate GHG emissions for each scenario.

The 2035 preferred growth scenario produces an 11 percent reduction in GHG emissions per capita over 2005 (9.2% -inclusive of the EMFAC tool adjustment factor- based on 18.9 to 17.9 pounds of CO_2 per capita plus a 1.8% reduction through off-model tools), while the 2035 Scenario 2 produces a 4.9 percent reduction in CO_2 per capita over the 2005 base year (-inclusive of the EMFAC tool adjustment factor- based on 18.9 to 18.7 pounds of CO_2 per capita and not inclusive of off model tool calculations). The 2020 growth scenario produces a 4.9 percent reduction in CO_2 emissions per capita over the 2005 base year (-inclusive of the EMFAC tool adjustment factor- based on 18.9 to 18.5 pounds of CO_2 per capita). Volume II, Appendix C: The 2019 RTP's Appendix C-Modeling and Technical Documents contains additional details.

The GHG emissions forecasts completed by SLOCOG using EMFAC 2014 apply to the only 8 of the vehicle classes (both diesel and gas of light duty autos (LDA), Light Duty Trucks 1 (LDT1), Light Duty Trucks 2 (LDT2), and Medium Duty Vehicles (MDV) of the vehicle classes in EMFAC 2014 and do not take include the estimated emissions reduction from the two state programs aimed at reducing tailpipe emissions from passenger vehicles and light-duty trucks (Pavley I and Low Carbon Fuel Standard). SB 375 exclusively targets GHG emissions reduction from these vehicle classes and only these emissions are presented in **Figure 3.4-8**.

As noted in **Section 2.0, Project Description**, the proposed RTP seeks to reduce the environmental impact of land use development by limiting the amount of land consumed and increasing the viability of walking, biking, and transit through the use of a balanced intermodal investment strategy, jobs-housing balance growth distribution, and allocation of more housing as compact (which includes Single Family homes on lots sized up to 6,000 sq. ft.) in existing urban areas to balance both growth and conservation and to reduce the annual greenhouse gas emissions produced in the county. More units of compact housing use less land and resources and are located closer to urban centers, thus reducing vehicle trips, trip distances, VMT, and emissions. Improved jobs-housing balance offers shorter trip to/from work as well as shopping opportunities, reducing vehicle trips, VMT, GHG, and saving money. Intermodal investments encourage non-auto trips for some users.

Impacts and Mitigation Measures

AB 32 Compliance and GHG Emissions

Impact GHG-1: Implementation of the capital improvement projects included in the 2019 RTP would not result in a net increase in greenhouse gas emissions that would conflict with the goals of AB 32 or result in a significant impact on the environment. This is considered a **Class III, less than significant**, impact.

Subsequent development activity anticipated through the preferred growth scenario anticipated with implementation of the 2019 RTP would result in direct emission of GHGs from stationary and mobile sources. As shown in **Figure 3.4-8**, within the project timeline, the overall greenhouse gas emissions will increase as a result of the project; however, emissions per capita will decrease. This difference is the result of anticipated population growth in the region. In the base year for SB 375 (2005), the county generated 2,453 tons of CO2, or 18.9 pounds per capita of emissions per day.

Implementation of the proposed RTP through the preferred growth scenario would result in the county generating 2,751 tons of CO2, or 17.9 pounds per capita of emissions per day (unadjusted). With adjustment factors included (change of EMFAC tools and off-model tools), an 11% per capita reduction is achieved. In comparison, future growth under 2035 Scenario 2 would result in the county generating 2,783 tons of CO2, or 18.7 pounds per capita of emissions per day(unadjusted). With adjustments, only a 7% reduction per capita is achieved.

The average weekday VMT was developed with SLOCOG's transportation modeling software, TransCAD to produce daily VMT for input and use with EMFAC 2014. EMFAC 2014 generates weekday emissions for SB 375 purposes (**Figure 3.4-8**).

Figure 3.4-8: SB 375 Emissions Table

Outputs	2015 (Base Year)	2020	2035-S2	2035-S3 Preferred Scenario	2035-S4	2045
Population	265,780	273,215	297,514	307,569	302,952	312,688
Total Average Daily VMT	6,247,757	6,034,038	6,584,438	6,500,544	6,555,297	6,741,098
Daily VMT per Capita	23.5	22.1	22.1	21.1	21.6	21.6
SB 375 CO2 Emissions						
Total Daily CO_2 (Tons)	2,611	2,529	2,783	2,751	2,768	2,852
Total Daily CO_2 (lbs)	5,222,000	5,057,200	5,566,000	5,502,400	5,536,000	5,703,200
Daily emissions per capita (lbs)	19.6	18.5	18.7	17.9	18.3	18.2
Percent change from 2005 CO_2 Per Capita (18.9 lbs)	3.8%	-2.2%	-1.2%	-5.5%	-3.5%	-3.6%
EMFAC 2014 Adjustment Factor	N/A	-2.7%	-3.7%	-3.7%	-3.7%	N/A
Off Model Tool Adjustment Factor	N/A	N/A	-1.8%	-1.8%	-1.8%	-1.8%
Final CO2 Per Capita % Reduction from 2005	3.8%	-4.9%	-6.7%	-11.0%	-9.0%	-5.4%
SB 375 Targets	N/A	-3%	-11%	-11%	-11%	N/A

Source: SLOCOG models with EMFAC 2014. Notes:
1. SLOCOG TransCAD regional traffic model was used to provide vehicle miles of travel (VMT) and vehicular speed information (speed bins) inputs for the EMFAC2014 vehicular emissions model. The TransCAD model is a single-mode vehicular model that accounts for VMT impacts of actual and proposed land use development. 4-D refers to design density, diversity, and destination, i.e., compact urban design in the allocation of new development.
2. SLOCOG TransCAD regional traffic model, a single-mode model, provides VMT values that include 100% of the VMT from trips starting and ending in San Luis Obispo County ("internal-internal" trips), 50% of the VMT from trips that start in San Luis Obispo County and end in another ("internal-external" trips), 50% of the VMT from trips that start in another county and end in San Luis Obispo County ("external-internal" trips), 0% of the VMT of trips that pass through the county but start and end in other counties.
3. SB 375 addresses greenhouse gas emissions from passenger vehicles and light-duty trucks (8 of the 51 vehicle classes in the EMFAC model). It should be noted that not including the other vehicle classes underestimates the total greenhouse gas emissions from vehicles in San Luis Obispo.

A central purpose and goal of the RTP is to reduce regional air emissions, which is accomplished primarily by promoting: a multimodal transportation system, growth that improves the jobs-housing imbalance, and compact-style housing in/near existing urban areas. These strategies each work to reduce reliance on the single-occupancy vehicle, and to reduce trip lengths. The 2019 RTP envisions a range of projects, including transit facilities, increased bus usage, bikeways, and pedestrian facilities, that collectively support the multimodal concept and increase the mobility of the citizens of the county. Additionally, the 2019 RTP strives to improve the jobs-housing imbalance and allocate more housing as compact-style to create a self-mitigating document. It should be noted that California's legislative GHG reduction standards imposed on automobile manufacturers and automotive fuel mixtures would further reduce the annual GHG emissions per capita produced in the county. When looking at all EMFAC vehicle classifications (**Figure 3.4-8**), emissions will increase overall by 2035 and 2045, but they will decrease on a per capita basis, and this impact is considered **less than significant**.

2019 RTP Goals, Policies, and/or Strategies that Serve to Reduce Potential Impacts
Compliance with the following 2019 RTP policy objectives and action Strategies would reduce project impacts related to greenhouse gases and climate change.

- *Employ low-cost solutions whenever possible, including transportation demand management principles.*
- *Support transportation investments and choices to enhance economic activity, travel, and tourism.*
- *Reflect community values while integrating land use and transportation planning to connect communities through a variety of transportation choices that promote healthy lifestyles.*
- *Integrate public health and social equity in transportation planning and decision-making.*
- *Support efforts to increase the supply and variety of housing, jobs, and basic services in locations that reduce trips, travel distances, and congestion on U.S. Route 101.*
- *Make investments and develop programs that support local land use decisions that implement the SCS and other strategies to reduce GHG emissions and make our communities more healthy, livable, sustainable, and mobile.*
- *Reduce GHG emissions from vehicles and improve air quality in the region.*
- *Conserve and protect natural, sensitive, and agricultural resources.*
- *Increase opportunities for partnerships between public agencies, local jurisdictions and private enterprise in the development of a comprehensive, integrated intermodal transportation system.*
- *Continue the region's balanced, intermodal investment strategy.*
- *Encourage modal shifts by expanding transportation options, including but not limited to, improvements for intercity rail, public transit, bicycling, park & ride lots, carpool, vanpool, and land use modifications.*
- *Continue collaboration with the local public health community to integrate healthy community design strategies and promote active transportation to improve the public health outcomes of the built environment through modal investments and the SCS.*
- *Encourage repurposing off-street parking, where appropriate, for infill development.*
- *Coordinate with local jurisdictions in general land use and circulation planning, traffic assessment, impact mitigation, and specific project development, where appropriate.*
- *Support the update and modification of zoning and development standards in downtowns and villages to consider or support: Mixed-use, infill, and residential development, reduced vehicle parking requirements, increased bicycle parking requirements, Intensification of land use, and modification of setbacks, building height, and size limitations.*
- *Support mixed-use and infill development near existing transit services and activity centers.*
- *Support local jurisdictions' zoning changes that establish minimum residential density on appropriate sites along existing commercial and transit corridors.*
- *Coordinate with local jurisdictions to ensure best practices of incorporating healthy community design in land use, circulation, and health elements of agency general plans.*
- *Support expanded transit service and increased frequency of transit service within and between communities to reduce vehicle trips and vehicle miles of travel.*
- *Support local jurisdictions' efforts to improve active transportation infrastructure to replace some short vehicle trips with bike and walk trips.*

- *Support the addition of peak-hour express transit trips to reduce vehicle congestion on major highways, and other primary transportation corridors.*
- *Support roadway corridor plans in downtown and village areas that investigate how to best use existing roadway width relative to traffic demands to assess options of reducing travel lanes and providing additional on-street parking and enhanced pedestrian and bicycle facilities, additional public space, and aesthetic streetscape improvements.*
- *Support local jurisdictions' incorporation of complete streets policies as part of periodic circulation element updates.*
- *Encourage local jurisdictions to establish and maintain a mix of transit, bicycle, and pedestrian access choices.*
- *Prioritize funding toward existing communities to improve the effectiveness of public investments; and support community revitalization through such strategies as encouraging redevelopment and mixed-use development along existing corridors and emerging transit corridors.*
- *Fund projects designed to reduce congestion in highly traveled and highly congested corridors (state highways system, local streets and roads, public transit and rail facilities, bicycle and pedestrian facilities) through performance.*
- *Facilitate transportation projects that improve jobs/housing balance, support sustainable communities, achieve intermodal transportation improvements, and/or reduce regional VMT growth.*
- *Improve the efficiency of the transportation system and minimize the adverse impact of commodity movement throughout the region.*
- *Promote the integration of bikeways and other active modes of transportation within existing, replacement, and newly proposed pipeline and utility corridor easements, where feasible.*
- *Provide financial support to TDM and TSM programs that support multi-modal systems, facilities and programs to improve the efficiency of the existing transportation system, reduce motor vehicle use, and improve air quality.*
- *Actively encourage modal shifts to reduce single occupant vehicles (SOVs) by expanding transportation options, including but not limited to, improvements for intercity rail, public transit, bicycling, Park & Ride lots, carpools, and vanpools.*
- *Support marketing, education and outreach programs to improve public awareness of alternative transportation choices.*
- *Support SLO Regional Rideshare as the primary means of implementing Transportation Demand Management strategies, Regional Mobility Management and regional Safe Routes to School non-infrastructure programs. Actively pursue grant funding for both Regional Mobility Management and regional Safe Routes to School.*
- *Actively encourage major employers, including private and government institutions, to provide incentives and increased opportunities for alternative transportation modes for commuter reductions including on-site priority parking for carpools and vanpools, carpool permits, free or subsidized transit passes, and safe, secure bike parking facilities; showers and locker rooms; and investigate other parking management.*
- *Cultivate relationships with partners (including Transportation Network Companies) and local jurisdictions to support programs encouraging "car free" visits to the region, and*

support bike- and car-sharing and other emerging mobility programs to reduce the need to own a vehicle.

- *Coordinate with partners and local jurisdictions to ensure consistency between long range plans; as well as helping to expedite implementation of TDM measures and other transportation measures into zoning updates, climate action plans and other relevant land-use, transportation or environmental planning documents.*
- *Continue to annually monitor performance objectives to evaluate the effectiveness of TDM and TSM efforts, and implement a strategy to make information available to various systems and applications in order to best align with current and future trends and serve travelers' needs.*
- *Facilitate and oversee vanpool subsidy program to provide a user-end subsidy that encourages the use of vanpools for travel during peak-hours.*
- *Provide operational improvement to U.S. Route 101 and major local streets to reduce congestion through low-cost solutions such as: ramp-metering and use of carpool, vanpool, and public transit improvements.*
- *Continue to engage and expand employee transportation coordinators at major employers; continue to offer guaranteed ride home services to rideshare participants; continue to support outreach and promotion of active transportation for all ages though the Regional Rideshare program at SLOCOG.*
- *Provide amenities at Park & Ride lots to maximize security and general utility, including: Americans with Disabilities Act (ADA) accessible facilities, lighting, landscaping, signage, bike racks/lockers, bus benches/shelters, electric vehicle charging facilities, solar panel shade structures, and other appropriate amenities as identified in SLOCOG's adopted 2017 Park & Ride Lot Study (August 2017).*
- *Provide regional fixed-route transit services that connect major and minor population centers; maintain appropriate local community transit services; and provide paratransit service, as mandated under ADA.*
- *Prioritize funding toward efficient and affordable transportation options to job centers and local businesses to stimulate economic activity.*
- *Update short-range transit plans (SRTPs) or sub-area transit plans every five to seven years addressing: goals and objectives, performance standards, riders' surveys, service needs evaluation, capital improvement program, and financial projections.*
- *Facilitate coordination of regional and local services to meet the transit needs determined by the unmet transit needs process, SRTP updates (in agreement with sub-area transit plans), and consistent with the RTP.*
- *Continue annually reviewing efforts made by operators to implement improvements recommended by triennial performance audits, annual fiscal audits, and Social Services Transportation Advisory Council. Require written responses to audit recommendations, and monitor progress in implementing SRTPs.*
- *Use timely updates of SRTPs, the coordinated human services transportation plan, and periodic performance audits to provide guidance on priorities and estimates of funding needs and shortfalls.*
- *Make efficient use of funding by maintaining, preserving, or enhancing existing infrastructure for all modes, using low-cost operational improvements, and using performance-based outcomes as the basis for prioritizing and funding projects, where feasible.*

- *Improve reliability, affordability, and convenience of public transportation services and improve passenger amenities where feasible and cost-effective, to make transit attractive to both non-choice and choice riders among the various providers.*
- *Encourage public transit providers to serve popular Park & Ride lots with fixed-route transit service without eliminating existing, well-used stops. Support and advocate the implementation of capital amenities to improve public mass transportation connection to existing Park & Ride lots, including but not limited to transit pull-outs, bus benches and shelters, bicycle racks and lockers, and development of multimodal centers, intercity rail and air travel facilities. Secure planning and capital funding for new Park & Ride lots strategically located along major corridors and designed to accommodate Bus Rapid Transit/Express Bus Stops.*
- *Increase the service efficiency by seeking opportunities to combine or date the various transit and paratransit options and investigate deviated fixed route services, when cost savings can be achieved without loss of necessary and/or high quality service.*
- *Use and install new operational strategies and technologies to optimize efficiency and system usage, including providing real time information.*
- *Ensure the inclusion of applicable Bus Rapid Transit concepts (e.g., transit signal priority and real-time bus arrival information) and a proposed funding or phasing program for implementation as part of the Capital Improvement Program for transit programs, either concurrent with the SRTP updates or integrated within interim capital recommendations.*
- *Support bicycle and pedestrian projects that improve interior circulation, access to key activity centers, or provide safe multi-modal access.*
- *Consistent with state Active Transportation Program guidance, encourage local agencies to develop an efficient, interconnected, network of streets, bikeways, walk ways and shared use paths that improve circulation, are easily navigable, meet the safety and mobility needs of all types of users and enhance connectivity to recreational areas, open space and trails, and promote economic vitality.*
- *Eliminate barriers in the active transportation and multi-modal network, including those related to transit access and accessible parking, to allow persons of all ages and abilities to use trails, recreation facilities, and open space and enhance opportunities for healthy and active lifestyles.*
- *Encourage partnerships with public and private agencies to advance to construction pedestrian and bicycle enhancements on routes of national, statewide or regional significance, including but not limited to, the Anza Trail Corridor, Edna Valley Trail, California Coastal Trail, Morro Bay to Cayucos Connector, Chorro Valley Trail, and the Bob Jones and City-to-Sea Trails.*
- *Coordinate with local agencies to conduct a biennial Bikeway and Pedestrian Improvement Hearing, ensuring meaningful outreach to transportation disadvantaged populations, and use information to help inform future policy and funding decisions.*

Mitigation Measures
None required.

3.5 CULTURAL/HISTORIC AND TRIBAL CULTURAL RESOURCES

This section of the EIR evaluates potential impacts of the proposed RTP on cultural and tribal cultural resources. The cultural resources setting is primarily based on applicable information provided by the County's Conservation and Open Space Element (COSE), last updated in May 2010 (SLO County 2010a), the certified SLOCOG 2010 RTP EIR (SLOCOG 2010), and previous EIRs prepared for projects in San Luis Obispo County.

3.5.1 Existing Setting

Cultural resources include paleontological resources, prehistoric resources, historic resources, and Native American resources. Cultural resources occur throughout San Luis Obispo County, in all types of land use designations. The archaeological, cultural, and historical resources of the county, especially those related to Native Americans, are an important part of its history and heritage. The following briefly describes the county's history and identifies known cultural resources.

Prehistory

San Luis Obispo County is in the territory historically occupied by the Native American Indian group known as Obispeño Chumash, with some overlap in the northern part of the county by the Salinan people. The Chumash occupied the region from San Luis Obispo County to Malibu Canyon on the coast, and inland as far as the western edge of the San Joaquin Valley, and the four northern Channel Islands. The Obispeño were the northernmost Chumash group, occupying much of San Luis Obispo County, including the Paso Robles area. The archaeological record indicates that sedentary populations occupied the coastal regions of California more than 9,000 years ago.

Chronological models for the region identify four cultural periods: the Paleocoastal Period 11,000–8,000 B.P. (before present), the Early Period 8,000–3,000 B.P., the Middle Period 3,000–1,000 B.P., and the Late Period A.D. 1000–1800. The Early Period is characterized by a primarily seed processing subsistence economy. The Middle Period was marked by a shift in the economic/subsistence focus from plant gathering and the use of hard seeds to a more generalized hunting-maritime-gathering adaptation, with an increased focus on acorns. The full development of the Chumash culture, one of the most socially and economically complex hunting and gathering groups in North America, occurred during the Late Period. Prehistoric marriage patterns and post-mission settlement patterns have also identified Yokuts and Salinan people living in the northern portions of San Luis Obispo County.

Most descriptions of Chumash culture indicate a relatively dense population that exhibited an elaborate economic, social, and political life. The complex character of Chumash society is grounded in a flexible and mixed economic strategy highlighting both rich maritime and terrestrial resources.

Villages comprised of round, domed structures made of willow poles and in areas of seasonal resource exploitation such as acorn and seed collecting and fishing locales. Subsistence was based on a combination of marine, freshwater, and terrestrial resources. Chumash harvested terrestrial, inland resources from dispersed camps during the spring and summer. During the late summer and early fall, dispersed groups came together to obtain fish and other marine resources from along the shore and

coastal kelp beds and within estuaries. During the winter they relied heavily on stored resources, but anadromous steelhead trout and salmon were also harvested at this time from freshwater streams.

Chumash technology highlights the exploitation of marine resources: fishhooks, angled bone hooks, nets, traps, harpoons, and other projectiles. Other tools used by Chumash include pestles, bowls, cooking slabs, and coiled and twined baskets. Bone and shell beads were used for personal adornment. In addition, the giant Pismo clam was ground into beads and disks for use as money. These shell disks were strung and traded by length. Other popular non-utilitarian items of Chumash culture included wooden and bone flutes, charmstones, and incised stone tablets.

Chumash society and their settlement system were organized around ranked lineages and distinct social stratification. Villages were usually controlled by a hereditary chief who maintained power through the accumulation and expenditure of wealth, primarily in the form of shell bead money.

History

The first European contact in San Luis Obispo County occurred in 1595, when Sebastian Rodriguez Cermeno put in at Port San Luis. The next documented European expedition to land in the area was that of Sebastian Vizcaino in 1602. Over 150 years passed before the next major European expedition reached San Luis Obispo County. In 1769, Gaspar de Portola and Fray Crespi departed the newly established San Diego settlement and marched northward toward Monterey with the objective of securing the port and establishing five missions along the route. They passed through present-day San Luis Obispo County that same year. Three years later, in 1772, Father Serra founded the Mission San Luis Obispo de Tolosa. In 1797, the Mission San Miguel Archangel was built. Spanish rule in Alta California came to an end in 1821 with Mexican independence. The missions were secularized in 1832. The Chumash and Salinan aboriginal way of life ended with Spanish colonization. Brought into the mission system, the native populations were transformed from hunters and gatherers into agricultural laborers and exposed to diseases to which they had no resistance. By the end of the Mission Period in 1834, the Chumash and Salinan population had been decimated by disease and declining birthrates. Population loss as a result of disease and economic deprivation continued into the next century.

By the 1870s, the county began to transform from a poor, remote, and sometimes violent outpost of rural California to a locale prized for its breathtaking scenery and rich farms and mines. The cinnabar mining rush began in the Cambria area and dairy farms predominated in Edna Valley and along the coast. The region began to transform, and dairy and mining commerce generated the need for improved modes of transportation. By 1894, San Luis Obispo could be reached by rail, and California State Polytechnic College was established.

Throughout the 1900s, San Luis Obispo County remained largely an agricultural county. The World Wars and the Korean War brought economic growth to the county as local suppliers supported the war effort. The county's agricultural diversity shielded it from the worst of the Great Depression of the 1930s. The second half of the century was punctuated with infrastructure projects needed to support post-war population increases. Santa Margarita Dam was built by the U.S. Army Corps of Engineers in 1942 to supply water for Camp San Luis Obispo; however, the water from the lake was never used for that purpose. Pacific Gas and Electric completed construction of the Morro Bay Power Plant in 1955.

The 1960s saw the completion of Whale Rock Dam (the first major dam designed and constructed by the California Department of Water Resources) and Lopez Dam.

Known Cultural Resources in the County

Paleontological Resources

Paleontological resources are fossilized remains of ancient environments, including fossilized bone, shell, and plant parts; impressions of plant, insect, or animal parts preserved in stone; and preserved tracks of insects and animals. Paleontological resources are valued for the information they yield about the history of the earth and its past ecological settings. In addition, fossils provide important chronological information used to interpret geological processes and regional history. They range from the well-known and well publicized (such as dinosaur and mammoth bones) to the more obscure but scientifically important fossils (such as paleobotanical remains, trace fossils, and microfossils). Paleontological resources are generally found in sedimentary rock units in which the boundaries of a sedimentary rock unit define the limits of paleontologic sensitivity in a given region. Most fossil material is found where bedrock is exposed on the surface, typically in mountainous terrain or in areas where erosion has removed the soil or regolith surface. As a result, paleontological sites are normally discovered in cliffs, ledges, or steep gullies, or along wave-cut terraces where vertical rock sections are exposed. Fossil material may be exposed by a trench, ditch, or channel caused by construction (SLO County 2007b). Occasionally vertebrate marine fossils such as whale, porpoise, seal, or sea lion can be found in marine rock units such as the Miocene Monterey Formation and the Pliocene Sisquoc Formations known to occur throughout central and southern California. Vertebrate fossils of continental material are usually rare, sporadic, and localized (SLO County 2007b). Scattered vertebrate remains (mammoth, mastodon, horse, ground sloth, camel, and rodents) have been identified from the Pleistocene non-marine continental terrace deposits on Vandenberg Air Force Base to the south.

Prehistoric (Archaeological) Resources

Prehistoric resources correspond to the remains of human occupation prior to European settlement. There are thousands of recorded archaeological sites located throughout the county, especially near major watercourses, ridgelines, canyon mouths, and coastal areas. Disclosure of specific information on archaeological sites is inappropriate for EIRs. Locations of sites are kept confidential in order to prevent vandalism, artifact hunting, and trespassing. The Central Coastal Information Center, operated under the California Office of Historic Preservation (OHP), provides site location data and/or the exact contents of surveyed sites only to licensed archaeologists, who are then prohibited from disclosing this information to the public. California Government Code Section 6254.10 exempts archaeological site information from the California Public Records Act, which requires that public records be open to public inspection (SLO County 2009b). Native American resources include ethnographic elements pertaining to Native American issues and values. Still today many people claim their Chumash and Salinan heritage in San Luis Obispo County. In general, they place high value on objects and places associated with their past history, namely archaeological sites and artifacts from sites.

Historic Resources

Historic resources refer to remains after European settlement and may be part of a "built environment," including human-made structures used for habitation, work, recreation, education, and religious worship, such as houses, factories, office buildings, schools, churches, museums, hospitals, bridges, and other structural remains. The National Register of Historic Places (NRHP) lists 34 historically

recognized locations in San Luis Obispo County, as shown in **Figure 3.5-1**. NRHP properties are distinguished by having been documented and evaluated according to uniform standards.

Figure 3.5-1: National Register of Historic Places in San Luis Obispo County

Resource Name		City	
Administration Building, Atascadero Colony	6500 Palma Avenue	Atascadero	1,977
Angel, Myron, House	714 Buchon Street	San Luis Obispo	1,982
Archeological Site 4SLO834	Address Restricted	Atascadero	1,982
Archeological Site 4SLO187	Address Restricted	San Simeon	1,980
Arroyo Grande IOOF Hall	128 Bridge Street	Arroyo Grande	1,991
Atascadero Printery	6351 Olmeda	Atascadero	2,004
Bank of Italy	1245 Park Street	Paso Robles	1,998
Brewster-Dutra House	1803 Vine Street	Paso Robles	1,982
Caledonia Adobe	0.5 miles south of 10th Street	San Miguel	1,971
Caliente Mountain Aircraft Lookout Tower	Northwest of New Cuyama	New Cuyama	1,975
Call--Booth House	1315 Vine Street	Paso Robles	1,988
Carrizo Plain Rock Art Discontiguous District	Address Restricted	California Valley	2,001
Corral de Piedra	South of San Luis Obispo on Price Canyon Road	San Luis Obispo	1,978
Dana Adobe South	End of Oak Glen Avenue	Nipomo	1,971
Eight Mile House	Off US 101 on Stagecoach Road	Santa Margarita	1,995
Guthrie House	Burton and Center Streets	Cambria	1,980
Hearst San Simeon Estate	3 miles northeast of San Simeon	San Simeon	1,972
Jack, Robert, House	536 Marsh Street	San Luis Obispo	1,992
Lincoln School	9000 Chimney Rock Road	Paso Robles	2,001
Mission San Miguel	US 101	San Miguel	1,971
Old Santa Rosa Catholic Church and Cemetery	Main Street	Cambria	1,982
Pacific Coast Railway Company Grain Warehouse	65 Higuera Street	San Luis Obispo	1,988
Piedras Blancas Light Station	Highway1/Point Piedras Blancas	San Simeon	1,991
Port San Luis Site	Address Restricted	San Luis Obispo	1,978
Powerhouse	Junction of South Perimeter Road and Cuesta Avenue	San Luis Obispo	1,993

Price, John, House	Highland Drive off Price Canyon Road	Pismo Beach	1,988
Rancheria Del Buchon	Address Restricted	Edna	1,978
Rancho Canada de los Osos y Pecho y Islay	Address Restricted	San Luis Obispo	1,975
Robles, Paso, Carnegie Library City Park	800 12th Street	Paso Robles	1,998
San Luis Obispo Carnegie Library	696 Monterey Street	San Luis Obispo	1,995
San Luis Obispo Light Station	Unknown	San Luis Obispo	1,973
San Luis Obispo Light Station	Point San Luis	Avila Beach	1,991
Southern Pacific Railroad Depot	1300 Mission Street	San Miguel	1,978
Tribune--Republic Building	1763 Santa Barbara Street	San Luis Obispo	1,993
William Shipsey House	1266 Mill Street	San Luis Obispo	2010

Source: NRHP 2018

In addition to those properties identified in the NRHP, the OHP designates California Historical Landmarks throughout the state. Historical landmarks are sites, buildings, features, or events that are of statewide significance and have anthropological, cultural, military, political, architectural, economic, scientific or technical, religious, experimental, or other value. San Luis Obispo County contains several state-designated historical landmark sites, identified below in **Figure 3.5-2**.

Figure 3.5-2: California State Landmarks

Resource Name		City
Dallidet Adobe, No. 720	1185 Pacific Street	San Luis Obispo
Estrella Adobe Church No. 542	542 Airport Road	Paso Robles
Hearst San Simeon State Historical Monument, No. 640	Hearst San Simeon State Historical Monument	San Simeon
Mission San Luís Obispo De Tolosa, No. 325	728 Monterey St.	San Luis Obispo
Morro Rock		Morro Bay
Rancho Nipomo (Cpt. William G. Dana Rancho), No. 1033	6715 Oakglen Avenue	Nipomo
Rios-Caledonia Adobe, No. 936	700 Mission Street	San Miguel

Source: OHP 2018

3.5.2 Regulatory framework

The county's cultural resources are protected by several federal, state, and local regulations and policies. These regulations and policies establish a regulatory framework for the county's cultural resources.

Federal

National Historic Preservation Act

The National Register of Historic Places is the nation's official list of cultural resources that warrant preservation. The National Register was authorized under the National Historic Preservation Act of 1966.

The National Register is part of a national program to coordinate and support public and private efforts to identify, evaluate, and protect the country's historic and archaeological resources.

The National Historic Preservation Act (NHPA) of 1996, as amended, is the primary mandate governing projects under federal jurisdiction that may affect cultural resources. Section 106 of the NHPA requires that, before beginning any undertaking, a federal agency take into account the undertaking's effect on historic properties and afford the Advisory Council on Historic Preservation (ACHP) an opportunity to comment on these actions. The Section 106 process entails the following six basic steps:

- Initiate consultation and public involvement
- Identify and evaluate historic properties
- Assess effects of the project on historic properties
- Consult with the State Historic Preservation Officer (SHPO) regarding adverse effects on historic properties, resulting in a memorandum of agreement (MOA)
- Submit the MOA to the ACHP for approval
- Proceed in accordance with the MOA

The National Register of Historic Places lists 35 historically recognized locations within San Luis Obispo County (refer to **Figure 3.5-1,** presented earlier in this section).

State

California Register of Historic Resources (CRHR)

Per Public Resources Code Section 5024.1(a), the California Register of Historic Resources is "an authoritative guide in California to be used by state and local agencies, private groups, and citizens to identify the state's historical resources and to indicate which properties are to be protected, to the extent prudent and feasible, from substantial adverse change." The CRHR is overseen and administered by the Office of Historic Preservation in the California State Parks. The criteria for listing resources on the California Register are based on those developed by the National Park Service for listing on the National Register of Historic Places with modifications in order to include a broader range of resources that better reflect the history of California. A resource is considered historically significant if it:

Is historically or archeologically significant, or is significant in the architectural, engineering, scientific, economic, agricultural, educational, social, political or cultural annals of California; and

Meets any of the following criteria:

Is associated with events that have made a significant contribution to the broad patterns of California's history and cultural heritage;

Is associated with the lives of persons important in our past;

Embodies the distinctive characteristics of a type, period, region, or method of construction, or represents the work of an important creative individual, or possesses high artistic values; or

Has yielded, or may be likely to yield, information important in prehistory or history.

The Office of Historic Preservation lists seven historically recognized places within San Luis Obispo County (refer to **Figure 3.5-2**, presented earlier in this section).

Regulations Concerning Native American Heritage

California Public Resources Code

California Public Resources Code 5097.9 states that no public agency, or a private party on a public property, shall "interfere with the free expression or exercise of Native American Religion." The code further states that:

> *No such agency or party [shall] cause severe or irreparable damage to any Native American sanctified cemetery, place of worship, religious or ceremonial site, or sacred shrine…except on a clear and convincing showing that the public interest and necessity so require. County and city lands are exempt from this provision, expect for parklands larger than 100 acres.*

Senate Bill 18 (Gov. Code, Sections 65352.3, 65352.4) requires that, prior to the adoption or amendment of a general plan or specific plan proposed on or after March 1, 2005, a city or county must consult with Native American tribes with respect to the possible preservation of, or the mitigation of impacts to, specified Native American places, features, and objects located within that jurisdiction. The intent of Senate Bill 18 is to provide California Native American tribes an opportunity to participate in local land use decisions at an early stage of planning, for the purpose of protecting, or mitigating impacts to cultural places. These consultation and notice requirements apply to the adoption and amendment of both general plans and specific plans.

AB 52 – Tribal Cultural Resources

AB 52 adds tribal cultural resources to the categories of cultural resources in CEQA, which had formerly been limited to historic, archaeological, and paleontological resources. The newly adopted 2018 CEQA Guidelines also incorporates AB 52. "Tribal cultural resources" are defined as either (1) "sites, features, places cultural landscapes, sacred places and objects with cultural value to a California Native American tribe" that are included in the state register of historical resources or a local register of historical resources, or that are determined to be eligible for inclusion in the state register; or (2) resources determined by the lead agency, in its discretion, to be significant based on the criteria for listing in the state register.

<u>Northern Chumash</u>

The Northern Chumash Tribal Council (NCTC) is a State of California Tribal Government, located in San Luis Obispo County. NCTC is a tribal government of the Chumash Nation; its members are the most logical descendants residing in San Luis Obispo County. NCTC provides tribal government input on all projects in the region. NCTC's mission is to offer a foundation for the Chumash people of San Luis Obispo County to bring tribal culture and heritage back to life, create dignity with the people, and educate the public. NCTC is involved in consultation to implement protocols for land use issues in San Luis Obispo County, which will offer a more complete project analysis for the protection of cultural places and sacred sites.

The yak tityu tityu yak tilhini (ytt), a tribe of indigenous Northern Chumash people from the San Luis Obispo County region, represent an unbroken chain of lineage, kinship, and culture. The purpose of ytt is to protect, preserve, and promote their culture, language, resources, and traditional ways. The ytt Northern Chumash were the earliest residents of the central coast of California; their homeland can be

generally described as the San Luis Obispo County region. The ytt people and culture declined with the arrival of Europeans, including the Spanish mission system, Mexican conquest, and American colonization. Yet, the Chumash culture has survived and is in the midst of an unprecedented revival despite tremendous death and often time-forced assimilation of tribal peoples.

State Health and Safety Code

Disturbance of human remains without the authority of law is felony (California Health and Safety Code, Section 7052). If the remains are Native American in origin, they are within the jurisdiction of the Native American Heritage Commission (NAHC) (California Health and Safety Code, 7052.5c; Public Resources Code, Section 5097.98)

According to state law (California Health and Safety Code, Section 7050.5; California Public Resources Code, Section 5097.98), if human remains are discovered or recognized in any location other than a dedicated cemetery, there shall be no further excavation or disturbance of the site or any nearby area reasonably suspected to overlie adjacent human remains until:

- The coroner of the county has been informed and has determined that no investigation of the cause of death is required; and
- If the remains are of Native American origin.
- The descendents from the deceased Native Americans have made a recommendation to the landowner or the person responsible for the excavation work for means of treating or disposing of with appropriate dignity the human remains and any associate grave goods as provided in Public Resources Code Section 5097.98; or
- The NAHC was unable to identify a descendent or the descendent failed to make a recommendation within 24 hours after being notified by the commission.

According to the California Health and Safety Code, six or more human burials at one location constitute a cemetery (Section 8100), and disturbance of Native American cemeteries is a felony (Section 7052). Section 7050.5 requires that construction or excavation be stopped near discovered human remains until the coroner can determine whether the remains are those of a Native American. If the remains are determined to be Native American, the coroner must contact the NAHC.

AB 52 – Tribal Cultural Resources

On September 25, 2014, Assembly Bill 52 was adopted creating a new category of environmental resources, "Tribal Cultural Resources," that must be considered under CEQA. Previously, only historic, archaeological, and paleontological resources had been included. The legislation also imposed new consultation requirements and mitigation protocols.

The definition of what may be considered a tribal cultural resource has been broadened under this legislation. "Tribal Cultural Resources (TCR)" are defined as either (1) "sites, features, places, cultural landscapes, sacred places and objects with cultural value to a California Native American Tribe" that are included in the State Register of Historical Resources or a local register of historical resources, or that are determined to be eligible for inclusion in the state register; or (2) resources determined by the lead

agency to be significant, based upon criteria for listing in the state register. If a project is determined to have a significant impact on a TCR, must discuss the impact and whether feasible alternatives or mitigation measures could avoid or substantially lessen the impact.

The legislation also imposed new consultation requirements that may affect these resources. AB 52 requires lead agencies to provide notice to tribes that are traditionally and culturally affiliated with the affected geographic area of a proposed project if they have requested notice.

Local

General Plan

The County has a vital interest in preserving its many older buildings and prehistoric and historic sites, which not only represent the heritage of San Luis Obispo County, but also help define the character of the region today. The County's General Plan includes goals, policies, and regulations that designed to preserve its cultural heritage. The General Plan's 2010 Conservation and Open Space Element includes policies aimed at avoiding disturbance to cultural sites where feasible and provision of mitigation in cases where the impact is otherwise unavoidable.

The General Plan, Land Use Element, maps are used for delineating urban archaeologically sensitive areas. However, these maps are not all -inclusive.

Land Use Ordinance and Coastal Zone Land Use Ordinance

Building and Construction Ordinance

In the event archaeological resources are unearthed or discovered during any construction activities, the following standards apply:

- Construction activities shall cease, and the County Environmental Coordinator shall be notified so that the extent and location of discovered materials may be recorded by a qualified archaeologist, and disposition of artifacts may be accomplished in accordance with state and federal law.

- In the event archaeological resources are found to include human remains, or in any other case when human remains are discovered during construction, the County Coroner is to be notified in addition to the Environmental Coordinator so proper disposition may be accomplished. If the remains are determined to be Native American, then the County Coroner must notify the Native American Heritage Commission within 24 hours.

The Coastal Zone Land Use Ordinance (Section 23.07.104)

The Coastal Zone Land Use Ordinance identifies Archaeologically Sensitive Area combining designations within the county coastal zone. These areas are defined as follows:

Any parcel within a rural area that is identified on the rural parcel number list prepared by the California Archaeological Site Survey Office on file with the County Planning Department.

Any parcel within an urban or village area that is located within an archaeologically sensitive area as delineated by the official maps (Part II) of the Land Use Element.

Any other parcel containing a known archaeological site recorded by the California Archaeological Site Survey Office.

This section of the Coastal Zone Land Use Ordinance also outlines procedures and requirements to apply to development within archaeologically sensitive areas.

3.5.3 Impacts and Mitigation Measures

Standards of Significance

Following Public Resources Code Sections 21083.2 and 21084.1, and Section 15064.5 and Appendix G of the State CEQA Guidelines, the County considers cultural resource impacts to be significant if a project would:

a) Cause a substantial adverse change in the significance of a historical resource as defined in Section 15064.5.

b) Cause a substantial adverse change in the significance of an archaeological resource pursuant to Section 15064.5.

c) Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature.

d) Disturb any human remains, including those interred outside of formal cemeteries.

Methodology

The analysis herein is focused on the potential cultural resources impacts associated with implementation of the RTP. It is based on a review of existing data including existing literature, County policies, programs, regulations and other various components, and publicly available documents, including previous EIRs prepared for projects within the county. The analysis recognizes the programmatic nature of the RTP; therefore, it focuses on the potential implications of the proposed policies of the RTP and not on the individual project-level effects of specific projects. The reader is directed to **Section 5.0, Cumulative Impacts,** of this EIR for analysis of cumulative impacts.

Impacts and Mitigation Measures

This section describes generalized impacts associated with the projects anticipated under the RTP. issue areas identified in Section 15064.5 and Appendix G of the State CEQA Guidelines, as listed above under Standards of Significance, are inlcuded in the following single impact statement:

Historic/Archaeological/ Paleontological/Human Remains/Tribal Cultural Resources (TCR)

Impact CR-1: Development under the RTP could disturb known and previously undiscovered cultural resources. Such impacts would be **Class II, significant but mitigable**.

Development of some of the RTP improvement projects could result in damage, destruction, or removal of known and/or unrecorded archaeological/paleontological/historical resources, resulting in a **potentially significant** impact.

General Impacts to Historic Resources

With regard to known significant historic resources, the location and nature of the RTP improvements were evaluated relative to the location of the properties listed in **Figures 3.5-1** and **3.5-2**. As these tables indicate, it has been determined that none of the RTP capital improvement projects would affect any California Historical Landmarks, sites listed on the National Register of Historic Places, or other points of historical interest. In each case, the RTP improvements are either well away from a project location or the improvement would likely avoid the resource.

General Impacts to Archaeological Resources

The RTP is programmatic in nature and involves a large number of possible transportation projects throughout the county, the location of which is only generally known. Consequently, it is not possible to assess all potential archaeological impacts at a project-specific, nor site-specific, level at this time. However, it is known that the archaeological districts listed on the National Register would not be affected by any of the RTP capital improvements. As for other known archaeological sites, it is possible that some of the roadway extensions and creek/river crossings would disturb or destroy identified resources. In particular, construction activities may disturb the resources, thereby exposing them to potential vandalism or causing them to be displaced from the original context and integrity. Construction may also affect unknown archaeological or paleontological resources. Thus, the RTP's impacts to known archaeological/ paleontological sites and unknown archaeological/ paleontological resources are considered **potentially significant**.

In general, prior to commencement of any action, development, or land use changes on lands subject to federal jurisdiction or for projects involving federal funding, a cultural resource survey and an environmental analysis must be prepared. Historic resources are also protected under the regulations of the National Historic Preservation Act and the Department of Transportation Act of 1966. County- and city-sponsored projects would be subject to local ordinance requirements, including General Plan provisions that protect cultural resources.

Tribal Cultural Resources

The nature of potential impacts to cultural resources, including Tribal Cultural Resources (TCR) cannot be fully evaluated at this point since the specific area of potential effect for each improvement project has not yet been defined. While the potential for impacts to known resources is considered low, the potential for significant TCR impacts remain.

2019 RTP Goals, Policies, and/or Strategies that Serve to Reduce Potential Impacts

There are not any RTP goals or policies addressing either Cultural Resources or Cultural Tribal Resources, except protection of environmental resources in general and, to some extent, those generic policies supporting social equity considerations.

In addition, at the time of specific project-level environmental review, the lead agency shall ensure compliance with the following mitigation measures, through placement of conditions of approval on applicable projects, to reduce impacts to a less than significant level.

Mitigation Measures

MM CR-1(a): The lead agency of a particular RTP project involving substantial earth disturbance, the removal or disturbance of existing buildings, or construction of permanent above-ground structures or roadways shall ensure that the following elements are included in individual environmental review:

A map defining the Area of Potential Effects (APE) shall be prepared for RTP improvements that involve substantial earth disturbance, the removal or disturbance of existing buildings, or construction of permanent above-ground structures or roadways. This map will indicate the areas of primary and secondary disturbance associated with construction and operation of the facility and will help in determining whether known cultural resources are located within the impact zone.

A preliminary study of each project area, as defined in the APE, shall be completed to determine whether or not the project area has been studied under an earlier investigation and to determine the impacts of the previous project.

If the results of the preliminary studies indicate additional studies are necessary, development of field studies and/or other documentary research shall be developed and completed (Phase I studies). Negative results would result in no additional studies for the project area.

Based on positive results of the Phase I studies, an evaluation of identified resources shall be completed to determine the potential eligibility/ significance of the resources (Phase Il studies).

Based on positive results of the Phase II studies, Phase III mitigation studies shall be coordinated with the Office of Historic Preservation, as the research design will require review and approval from the OHP. In the case of prehistoric or Native American related resources, the Native American Heritage Commission and/or local representatives of the Native American population shall be contacted and permitted to respond to the testing/mitigation programs.

MM CR-1(b): If development of a RTP project requires the presence of an archaeological monitor, lead agency shall ensure that a certified archaeologist/paleontologist monitors the grading and/or other ground-altering activities. The schedule and extent of the monitoring will depend on the grading schedule and/or extent of the ground alterations.

MM CR-1(c): If cultural resources are encountered during development, work should be halted to avoid the materials and their context until a qualified consulting archaeologist and

Native American representative (if appropriate) have evaluated the situation, and recorded identified cultural resources and determined suitable mitigation measures.

MM CR-1(d): The lead agency shall ensure at the project-specific stage that mitigation for potential impacts to significant cultural resources consider, for example, the following measures:

Realignment of the project right-of-way (avoidance; the most preferable method);

Capping of the site and leaving it undisturbed;

Addressing structural remains with respect to NRHP guidelines (Phase III studies);

Relocating structures per NRHP guidelines;

Creation of interpretative facilities; and/or

Development of measures to prevent vandalism.

MM CR-1(e): The lead agency, in consultation with a Native American representative, and a qualified archaeologist, shall develop a monitoring plan for earthmoving activities within native soil.

Implementation of the above mitigation measures would reduce potential impacts to cultural resources to a **less than significant** level.

2019 RTP Goals, Policies, and/or Strategies that Serve to Reduce Potential Impacts

There are not any RTP goals or policies addressing either Cultural Resources or Cultural Tribal Resources, except protection of environmental resources in general and, to some extent, those generic policies supporting social equity considerations.

MM CR-1(f): Mitigation may include any, or a combination of the following measures, or other measures upon which the parties reach agreement.

- Preservation in place
- Protecting the cultural character and integrity of the resource
- Protecting the traditional use of the resource
- Protecting the confidentiality of the resource
- Permanent conservation easements with culturally appropriate management criteria

Implementation of the above mitigation measures at the project/site-specific phase will be considered in conjunction with subsequent (project specific) environmental (CEQA and, if required, NEPA) review, at which time specific mitigation measures shall be crafted. For purposed of the programmatic analysis, these general provisions would reduce potential impacts to tribal cultural resources to a **less than significant** level.

3.6 ENERGY RESOURCES

This section describes the existing energy resources in San Luis Obispo County and evaluates the effects associated with implementation of the proposed 2019 RTP. The energy resources setting is based, in part, on information provided by the County's Conservation and Open Space Element (COSE), last updated on May 11, 2010 (SLO County 2010a) and Offshore Energy Element, adopted in 12/15/92, and previous EIRs prepared for projects in San Luis Obispo County.

3.6.1 Existing Setting

California is one of the largest users of energy in the nation. 40 percent all energy consumed in the state is used to move people and goods, and personal vehicles account for over 50 percent of all transportation energy use. Gasoline is the most used transportation fuel in California, with ninety seven percent of all gasoline being consumed by light-duty cars, pickup trucks, and sport utility vehicles. In 2015, 15.1 billion gallons of gasoline were sold. After the peak years 2007, consumption has been experiencing a steady decline. California gasoline sales are currently averaging 4.3 million gallons per day, according to the U.S. Energy Information Agency (EIA, 2019). Over 35 million vehicles are registered in California. These vehicles produce about 40 percent of the state's greenhouse gas emissions.

As residents move into San Luis Obispo County, the location of new homes in relation to jobs and services will have a significant impact on energy use. The location of different land uses in relation to one another can obviously affect travel distances and the mode of transportation people are most likely to use (e.g., walking, bicycle, car, transit). Different land uses also generate varying amounts of traffic; a day care center will generate more trips than a single-family home.

Energy Resources

Energy resources are imported into the county primarily by the two major utilities: Pacific Gas and Electric (PG&E) providing electricity and Southern California Gas Company providing natural gas. Natural gas and uranium are imported into the county for conversion by the Morro Bay Power Plant (a fossil fuel facility) and the Diablo Canyon Power Plant (a nuclear facility) to electricity, which is then exported to the main state power grid from which the county receives power. Although less than 1 percent of the state's population resides in San Luis Obispo County, two power plants convert 10–15 percent of the electricity consumed in the state. Diablo Canyon is planned to be decommissioned in the near future. In addition, the Morro Bay Power Plant has a limited lifespan, after already having been "repowered" once to extend its estimated 30-year lifespan. The fate of safely decommissioning Diablo Canyon is uncertain, given pending matters in association with PG&E's impending bankruptcy.

Figure 3.6-1: Morro Bay Power Plant

Source: Shutterstock

The county has abundant solar energy potential, with two large solar facilities having been sited on the Carrizo Plains. The Carrizo Plains had been the site of the state's largest solar photovoltaic (PV) facility, operated by Siemens, during the mid- to late-80s. Rapidly evolving solar technologies have since made solar competitive with conventional energy sources. Similarly, technological developments in offshore wind power have presented new opportunities for renewable energy on the county's coastline. A decreased reliance on imported energy resources has had positive impacts on San Luis Obispo County's local economy.

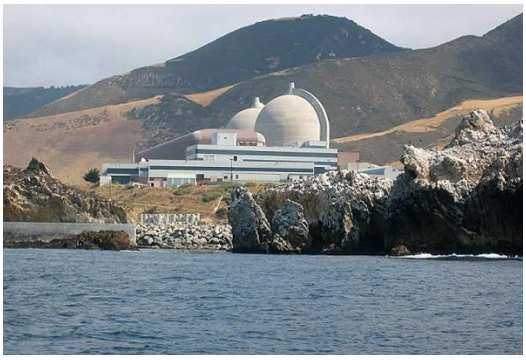
There are several oil and gas fields in the county, along with an extensive network of pipes, pump stations, storage tanks, and marine terminals to transport the oil resources. The safe operation of such facilities continues to be important issues in the county.

Energy Conservation

The production, transportation, and use of energy by our society raises important public policy issues involving the activities of both government and the private sector. Energy issues affect commerce, the provision of public services, land use planning and development, and transportation, as well as most other aspects of daily life.

Using energy more wisely (energy conservation and efficiency) will save residents and businesses money and will lead to a better environment. Changes in land use patterns, transportation systems, building designs, agricultural practices, and recycling efforts can all lead to greater energy efficiency and conservation.

Figure 3.6-2: Diablo Canyon Nuclear Power Plant



Source: SLO County 2010b

As evidenced in the Energy chapter of the County General Plan Conservation and Open Space Element (COSE), the energy focus in the county has changed from fossil fuels production and energy generation to alternative energy, more efficient building "green building" design, and reduction in (per-capita) vehicle miles traveled. The reasons for this change in focus include the increasing cost of fossil fuels, the move toward reducing greenhouse gas emissions, and the cost of building new infrastructure for sprawling development.

Land use strategies for saving energy include compact urban form, transit-oriented -development (TOD), increased solar access, providing for mixed land uses, and energy conservation through landscaping.

Transportation

The county continues to expand its bus service and ridership to meet the needs of a population that is located over a large geographic region. Housing affordability continues to be a concern driving more and more people to reside further from their places of work, toward the northern and southern portions of the county while many of the jobs are located in the central portion. Consequently, many people commute relatively long distances to work. Lengthy commutes lead to increased vehicle trips, gasoline consumption, and air pollution. An important goal of the RTP is to encourage residents to use transit

systems and other energy-efficient transportation options. The RTP is also promoting a better balance between available jobs and housing. Together, through these combined efforts, SLOCOG is attempting to reduce the total vehicle miles traveled. While this has numerous benefits, from improved health and quality of life to attracting visitors, the overriding benefit is the opportunity to reduce greenhouse gas (GHG) emissions.

Bicycles provide an energy-efficient, clean, and inexpensive (relative to automobiles) form of transportation. As new job opportunities become concentrated in existing county communities, more residents will be able to walk or ride bikes. This can be encouraged through better street design, which places a higher priority on bike and pedestrian mobility. Such elements, referred to as "complete streets," are being encouraged in the RTP. Bikes can also be used in conjunction with bus transit and Amtrak. And, recent advances in battery technology has made electric bikes and electric scooters more practical.

Public transit is often viewed as a key component in reducing vehicle trips in and among cities. Mass transit and carpooling require certain population densities before they become feasible. A density of 12 dwelling units per acre is considered the minimum necessary to support bus routes (SLO County 2008b). The RTP is promoting an expansion of transit facilities in order to facilitate transit-oriented-development (TOD), thereby making transit more convenient and efficient.

Public transit needs continue to increase with increasing population anticipated over the next 25 years. In particular, traffic volumes on the US 101 corridor between San Miguel and Santa Maria in northern Santa Barbara have increased substantially and, in response, the frequency of regional transit service has increased between San Miguel and San Luis Obispo and between San Luis Obispo and Santa Maria.

Construction

The production and transportation of construction materials typically involve the burning of fossil fuels and result in the emission of greenhouse gases. Current atmospheric concentrations of carbon dioxide (CO_2), the primary greenhouse gas, have led to a rate of global climate change that could have profound implications for San Luis Obispo County.

Most construction debris is transported directly to local landfills. The construction of a 2,000 square foot home generates approximately 3 tons of waste. Construction waste, alternatively, can often be reused and recycled, thereby reducing the amount of waste transported to landfills.

3.6.2 Regulatory Framework

Federal

National Energy Policy Act of 1992

The National Energy Policy Act of 1992 calls for programs that promote efficiency. The act encourages efficiency in the existing built environment by promoting:

a) Home energy rating programs, which would communicate the energy-efficient rating for the home to potential homebuyers at the time of sale;

b) Energy-efficient mortgages that provide financing incentives to make energy-efficient improvements in the homes by incorporating the cost of such improvements in the mortgage;

c) Retrofit ordinances that enforce retrofit standards and regulations at the time of the sale of a building;

d) Energy audits for federal governmental facilities and monitoring the implementation of energy-efficient improvements; and

e) Training and education to the general public and designers on energy-efficient improvements.

The act also encourages alternative fuels by requiring yearly percentage increases in alternatively fueled vehicles acquired in federal vehicular fleets and promotes the use of alternative fuels and alternatively fueled vehicles by establishing a public information program.

Other Federal Initiatives

The National Energy Policy Act of 1992 was superceded by the 2005 Act, which placed increased emphasis upon development of renewables and later, President Obama's 2015 Clean Power Plan, a major emphasis of which was also renewable energy development.

State

1992–1993 California Energy Plan

The 1992–1993 California Energy Plan emphasizes a "portfolio" approach to energy planning, including development of a diverse energy base. Cost-effective improvements in efficiency and development of new fuels and technologies comprise the heart of the state's plan. Similar to utility companies, the plan elevates the concept of energy conservation to a new level of importance, considering it to offer the most efficient method of meeting tomorrow's increased energy needs. Energy efficiency now ranks as the least expensive and environmentally preferred strategy. The State's Energy Plan specifies Recommendations and Action Steps that are similar to some of the national programs described above. Other programs include:

a) Encouraging utility companies to design long-term rebate programs to assist the business community;

b) Developing voluntary guidelines for achieving cost-effective energy savings which exceed the state standards;

c) Increasing the efficiency of transportation in California by planning a more cost-effective, energy-efficient, integrated system of transportation and land use (higher-density, mixed-use projects linked with mass transit, telecommuting, etc.); and

d) Including the full costs and benefits of environmental impacts in the economic evaluation of all proposed energy activities to capture full benefits in the marketplace.

The California Energy Commission encourages local jurisdictions to prepare and adopt an energy element in their general plans. Energy elements assume an essential role by shaping and refining

broader-based state and federal policies to fit local needs. More importantly, however, the commission recognizes that local jurisdictions can do much to ensure their own sustainable energy future, since local governments often directly influence decisions about land use, building standards, local transportation, and waste disposal.

California Building Energy Efficiency Standards

Title 24, Part 6 of the California Code of Regulations, known as the Building Energy Efficiency Standards, was established in 1978 in response to a legislative mandate to reduce California's energy consumption. The standards are updated periodically to allow consideration and possible incorporation of new energy efficiency technologies and methods. After adoption of the California Energy Security and Reliability Act of 2000 (AB 970), the California Energy Commission produced changes to the Building Energy Efficiency Standards.

California's energy standards were revised several times since adoption of the original Energy Efficiency Standards created in 1978. These Standards have been responsible for saving Californians billions in reduced electricity bills since 1977, according to the California Energy Commission. In January 2017, the California Energy Commission adopted updated standards: The 2016 Building Energy Efficiency Standards. The current 2019 Energy Efficiency Standards (Title 24) go into effect in 2020. Most significantly, the 2019 Standards include a 2020 rooftop solar mandate.

S.B. 100

On September 6, 2018, Governor Brown signed SB 100, increasing California's RPS to 60% by 2030. California has also set a goal of 100 percent clean electric power by 2045. As the world's fifth largest economy, this will have an enormous effect far beyond California.

Local

San Luis Obispo County General Plan

San Luis Obispo County has an Energy Chapter in its adopted Conservation and Open Space Element of the General Plan. The purpose of the Energy Chapter is to (1) increase energy efficiency in the county, (2) provide policy guidance regarding the implications of energy use, (3) document the county's energy resources, (4) determine land use and environmental criteria for evaluating future energy projects, and (5) provide alternatives which encourage exceeding the state's energy regulations for new construction. The chapter covers current energy use in the county and associated costs, methods and opportunities for energy conservation and efficient use, as well as electricity production and transmission.

Land Use Ordinances

The County's Inland (Title 22) and Coastal (Title 23) Land Use Ordinances both contain regulations pertaining to energy resources. For example, Section 23.04.220 (Energy Conservation, Including Design for Solar Orientation) states that "new development shall consider compact community design and incorporation of energy efficiency measures," and Section 23.07.040 (Energy and Extractive Resource Area (EX)) states that "the purpose of this combining designation is to protect significant resource extraction and energy production areas (Title 22 also includes this designation as outlined in Section 22.14.040). Both ordinances also have regulations pertaining to resource extraction, drilling, surface mining and reclamation, underground mining, refining, electricity-generating plants, and petroleum resource development.

3.6.3 Impacts and Mitigation Measures

STANDARDS OF SIGNIFICANCE

The following standards are based on State CEQA Guidelines Appendix F. A significant impact to energy resources and conservation would occur if implementation of the proposed project would result in inefficient, wasteful, and unnecessary consumption of energy.

METHODOLOGY

The analysis herein is focused on the potential energy resources impacts associated with implementation of the RTP. It is based on a review of existing planning documents, including the various components and policies of the County General Plan and other County regulations affecting energy resources and implementation of the proposed RTP. The analysis recognizes the programmatic nature of the RTP; therefore, it focuses on the potential implications of the proposed policies of the RTP and not on the individual project-level effects of specific projects. The reader is directed to the **Section 5.0, Cumulative Impacts** of this EIR for analysis of cumulative impacts.

IMPACTS AND MITIGATION MEASURES

This section describes generalized energy impacts associated with implementation of the projects listed in the RTP.

Energy Supplies

Impact E-1: Many of the capital improvement projects included in the RTP would result in a decrease in energy consumption associated with vehicle fuel. This is considered a **Class III, less than significant**, impact.

Implementation of the proposed project would involve grading and construction of building pads, roads, structures, and other appurtenant improvements as well as processing improvements. These construction activities would require the use of gasoline, diesel fuel, other fuels, and electricity in order to be completed. Energy usage during construction typically involves the use of motor vehicles for transportation of workers and equipment, but also for direct construction actions such as the use of cranes or lifts. Additional energy usage would occur as power for tools and equipment used on site, including but not limited to gas generators, air compressors, air handlers and filters, and other typical direct construction energy uses. Gas and other fuel is available in the community through a network of existing private distributorships. The proposed project is similar in nature to other transportation construction activity within the county, and the power and energy system is considered adequate to handle the demand during construction. Because of the high cost of fuel, construction activities are not anticipated to result in wasteful, inefficient, and unnecessary use of energy, as construction contractors would purchase fuel from local suppliers and would conserve the use of their supplies to minimize the cost of constructing the project. Construction as a result of the RTP would use electricity and gas as a short-term consequence of project construction.

A central purpose and goal of the RTP is to promote a multimodal transportation system, thus reducing reliance on energy consumption. The RTP envisions a range of projects, including transit facilities, increased bus usage, bikeways, pedestrian facilities, and rail projects, that collectively support the multimodal concept and increase the mobility of the citizens of the county. In a qualitative sense, these projects will contribute to the achievement of a reduction of energy resource consumption. A quantitative analysis of energy use that could result from implementation of the RTP is not feasible due to the varying time frames and other uncertainties regarding implementation of individual RTP projects.

2019 RTP Goals, Policies, and/or Strategies that Serve to Reduce Potential Impacts

- Improve accessibility to goods, services and jobs and facilitate safe and convenient alternative forms of transportation.
- Minimize energy requirements through the planning, programming, and implementation of services, facilities, and land use configurations which conserve energy.
- Facilitate reduction in trips and travel distances through assisting development and implementation of local jurisdictions' general plans that support livable community concepts and efforts.
- Reduce vehicle miles of travel related emissions by encouraging the use of public transit and other alternative forms of transportation by supporting and encouraging the adoption of new development standards that promote more compact communities.
- Support compact, mixed use and infill development in existing communities; and, encourage incentives such as funding, flexible standards and streamlined permit processing for mixed use and affordable housing.
- Provide more transportation choices that are safe, reliable and economical, which improve air quality, reduce greenhouse gas emissions and promote public health.

Additionally, this EIR incorporates the 2019 RTP's goals, policy objectives, and action strategies as listed in 2019 RTP Chapter 3 which is included in **Volume II, Technical Appendices** to reduce potential impacts.

The impacts of the RTP on energy resources can be classified as **less than significant** through the implementation of applicable goals and strategies**.**

Mitigation Measures

None required.

3.7 GEOLOGY AND SEISMICITY

This section describes the geologic conditions and related hazards in the county. The setting is primarily based on applicable information provided in the County's 2010 Conservation and Open Space Element (COSE) (SLO County 2010a), the SLOCOG 2010 RTP EIR (SLOCOG 2010), and previous EIRs prepared for projects in San Luis Obispo County.

3.7.1 Existing Setting

Topography and Local Geology

San Luis Obispo County is located in the Coast Range geomorphic province of California, which was formed at the intersection of two tectonic plates. The compression and shearing of these two plates resulted in a system of faults and folds, which in combination with the various rock types found throughout the county, allow for the division of the county into four distinct areas for their type of faulting and seismic activity. The four domains are the Santa Maria Basin-San Luis Range, the Coastal Franciscan, the Salinan, and the Western San Joaquin Valley domain.

The county's landscape is defined by five mountain ranges including the Santa Lucia, Temblor, Caliente, La Panza, and San Luis mountains. The higher peaks, many of which exceed 3,000 feet, are located in the Santa Lucia and Caliente ranges. The average elevation of peaks in the San Luis Range is approximately 1,600 feet. The northern coastal plain consists primarily of a relatively narrow bench that connects to the Santa Lucia Range. Near the Chorro and Los Osos valleys, the northern coastal sector makes its deepest inland penetration.

The southern sector primarily consists of the Arroyo Grande Valley, an upland area of ancient dunes referred to as the Nipomo Mesa, and a portion of the Santa Maria River Valley. The south coastal area is also characterized by an extensive dune area of recent origin along the coast.

Due to the prevalence of rolling or mountainous terrain, approximately 60 percent of the county comprises slopes of 30 percent or more. Approximately 23 percent of the county comprises 9 to 30 percent slopes, and approximately 17 percent of the county comprises slopes less than 9 percent.

Earthquake Ground Shaking and Fault Rupture

San Luis Obispo County is considered a seismically active region, with earthquake-related hazards having the potential to result in significant public safety risks and property damage. Direct effects of an earthquake include rupture of the ground surface along the trend or location of a fault and ground shaking that result from fault movement. Other earthquake-related hazards may include liquefaction, seismic settlement, landslide, tsunami, seiche, slope failure, flooding from a dam failure, fires, and structural hazards.

Three active faults located in San Luis Obispo County are zoned under the State of California Alquist-Priolo Fault Hazards Act: the Hosgri-San Simeon, the Los Osos, and the San Andreas faults. Seventeen other faults are considered potentially active or have uncertain fault activity in the county. In populated

areas, the greatest seismic-related potential for loss of life and property damage is a result of ground shaking from a nearby earthquake.

The county contains no lakes of sufficient size that are susceptible to tide-like influences resulting from strong winds (known as a "seiche effect"). However, coastal portions of the county are subject to potential tsunami hazards.

Slope Stability

Areas where concentrations of known landslides exist in the county include several small canyons that extend northeast to the Estrella River, areas along fault traces in the Nacimiento Fault Zone just west of Atascadero in the Las Tablas region, and southeast of the community of Santa Margarita. A concentration of landslides also exists in a zone of clayey material that overlies igneous and shale bedrock in the San Luis Range and along the coastal slopes of the Santa Lucia Range, Port San Luis, and hills east of Cayucos. The largest area of potentially unstable younger sedimentary rocks is located in the extensive drainage basin of the Salinas River. The Franciscan Formation of the mountainous coastal area of the county is a zone of both weak and resistant rock. Landslides are relatively common in the sandstones and shales of the Franciscan terrain, and the shoreline has been deeply etched into these rocks where marine erosion is active along the coast.

Geologic Study Areas

The County identifies areas of potential geologic concerns as Geologic Study Areas (GSA). The GSA combining designation is applied to areas where geologic and soil conditions could present new development with potential hazards to life and property. **Figure 3.7-1** outlines the location and reasons for GSAs in each of the county's planning areas.

Figure 3.7-1: San Luis Obispo County Geologic Study Areas (GSA)

Planning Area		Reason	Location/(Land Use Category)
Adelaida	YES	Landslide	Santa Lucia Range, Foothill, and Hillside areas (AG, RL)
El Pomar/Estrella	NO	–	
Estero	YES	Landslide	Hillsides east of Cayucos and Morro Bay (AG, RL, OS)
Huasna-Lopez	YES	Landslide	Portions of Santa Lucia Range and Hillsides Areas (AG, RL)
Las Pilitas	YES	Landslide	Hi Mountain Lookout Road (OS), Stanley Mountain (OS)
Nacimiento	YES	Landslide	Santa Lucia Range and Foothill Areas – western portion (AG, RL, OS)
North Coast	YES	Landslide	Monterey Co. Line to Rancho San Geronimo-Inland (AG), Underdeveloped lots in Cambria – slopes >20 percent (RL, RSF, AG, RS), Coastline (AG, REC, RL, RSF, OS), San Simeon Fault Zone-San Simeon Point- San Carporforo Creek (RL, AG)
		Bluff Erosion	
		Seismic	
Salinas River	YES	Landslide	Southwestern corner of planning area and outlying areas (AG, OS, RL), Western corner of Atascadero City Limits (RR)

San Luis Bay –Coastal	YES	Bluff Erosion	Point Buchon to Avila Beach (AG, PF), Pirate's Cove (RL, OS, RS)
San Luis Bay –Inland	YES	Landslide	Irish Hills, Indian Knob, Pismo Beach Hillside, Price Canyon, Portions of Squire Canyon and Montana de Oro (AG, RL, REC, PR)
San Luis Obispo	YES	Landslide	North, East, and West Rural Areas (AG, RL, REC, RR), Southwestern Corner Los Ranchos/Edna, Eastern corner of SLO URL (RS)
Shandon-Carrizo	YES	Landslide	Temblor Range, Red Hills, Hubbard Hill-Freeborn & Caliente Mtns. (RL),
		Seismic	San Andreas Fault Zone (RL), Eastern California Valley (VRL)
South County –Coastal	NO	–	
South County Inland	YES	Landslide	Temmattate Ridge (AG)

Legend: AG – Agriculture, RL – Rural Lands, OS – Open Space, RSF – Residential Single Family, RS – Residential Suburban, REC – Recreation, RR – Residential Rural, PF – Public Facilities, VRL – Village Reserve Line, URL – Urban Reserve Line

Source: County of San Luis Obispo Area Plans

Soil-Related Hazards

Soil-related hazards include expansive and erosive soils, as well as liquefaction. These types of hazards are described below.

Expansive Soils

Certain clay-rich soils can cause considerable damage to structures, streets, and roads as they shrink and swell in response to seasonal changes in their moisture content. Such soils are referred to as expansive. In late summer, expansive soil shrinks and cracks (up to 1 to 4 inches wide) as the soil dries and hardens. In the wet season, swelling of the clay closes the cracks, and the soil then is plastic and weak. The forces exerted during expansion and contraction are sufficient to heave and distort buildings and to crack shallow foundations and pavements.

Erosive Soils

Soil erosion is the removal of soil by water and wind. The rate of erosion is estimated from four soil properties: texture, organic matter content, soil structure, and permeability. Other factors that influence erosion potential include the amount of rainfall and wind, the length and steepness of the slope, and the amount and type of vegetative cover. Coastal erosion occurs during large storms when waves erode the cliffs along the coastline, at varying rates depending on the geology. Structures built near the edge are threatened by the retreat of the bluff. Slopes with erosive soils are particularly susceptible to landslides and slope instability. Compounding factors include wet weather, improper grading techniques, improper drainage, steep slopes, adverse geologic structure, earthquakes, or any combination of these. The hydraulic effect of water contributing to the erosion process depends largely upon rainfall. The amount and intensity of rainfall that reaches the ground is partially determined by the overlying vegetative cover. Approximately 60 percent of the land areas in the county is prone to erosion, approximately 19 percent is prone to moderate erosion, and slight erosion conditions prevail on approximately 20 percent. The remaining one percent of the county comprises river wash erosion in floodplains and wind erosion in sand dune areas.

Liquefaction
Liquefaction is the sudden loss of soil shear strength during strong ground shaking, due to increased pore water pressure. Liquefaction can also occur as the result of decreased effective stress, which is defined as that portion of the total stress on the soil that is borne by soil grains. As a result, sufficiently liquefied soils can no longer support structures built on them or maintain buoyant structures placed beneath them. Liquefied soils on sloping ground may flow in a semi-fluid or plastic state (a lateral spreading), disrupting the original ground surface and damaging improvements in their path.

3.7.2 Regulatory Framework

State Regulations

The Alquist-Priolo Earthquake Fault Zoning Act
The Alquist-Priolo Earthquake Fault Zoning Act of 1972 sets forth the policies and criteria of the State of California in regard to building within active fault zones. The act outlines cities' and counties' responsibilities in prohibiting the location of developments and structures for human occupancy across the trace of active faults. The policies and criteria are limited to potential hazards resulting from surface faulting or fault creep within Earthquake Fault Zones delineated on maps officially issued by the State Geologist.

International Building Code and 2016 California Building Standards Code
The Uniform Building Code was replaced after 1997 by the International Build Code. The International Code was intended to provide consistency for safe construction and eliminate differences between the three predecessor codes. The IBC is used mostly in the U.S. The California Building Code (incorporated by reference) provides standards for testing, building construction, and erosion control, as well as safety measures for development, including within earthquake-prone areas. The 2016 California Building Code, which was adopted in 2017, is updated every three years.

Local Regulations

County General Plan
The Safety Element of the County of San Luis Obispo General Plan addresses emergency preparedness and describes potential disasters including fire, flood, and geologic hazards. The County has also mapped and established a Geologic Study Area (GSA) combining designation in potentially hazardous areas to ensure new development considers geologic and soil conditions that may create a danger to life and property.

County Land Use Ordinance
The County Land Use Ordinance contains design considerations with respect to seismic, landslide, and liquefaction hazards. Section 22.14.070 of the Inland Land Use Ordinance and Section 23.07.080 of the Coastal Land Use Ordinance require land use permit applications within a GSA be accompanied by a geology and soils report prepared by a certified engineering geologist and/or registered soils engineer, unless the County Engineer determines that sufficient information exists in previous geology or soils reports.

3.7.3 Impacts and Mitigations

Measures

STANDARDS OF SIGNIFICANCE

1. A geology or soils impact is considered significant if implementation of the proposed project would result in any of the following (based on State CEQA Guidelines Appendix G):
2. Expose people or structures to potential substantial adverse effects, including the risk of loss, injury or death involving:
3. Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault. (Refer to Division of Mines and Geology Special Publication 42).
4. Strong seismic ground shaking.
5. Seismic-related ground failure, including liquefaction.
6. Landslides.
7. Result in substantial soil erosion or the loss of topsoil.
8. Be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction, or collapse.
9. Be located on expansive soil, as defined in the Uniform Building Code, creating substantial risks to life or property.
10. Have soils incapable of adequately supporting the use of septic tanks or alternative wastewater disposal systems where sewers are not available for the disposal of wastewater.

METHODOLOGY

The analysis herein is focused on the potential geology and seismicity impacts associated with implementation of the RTP. The analysis recognizes the programmatic nature of the RTP; therefore, it focuses on the RTP broadly and not on the individual project-level effects of specific projects. The reader is directed to **Section 5.0, Cumulative Impacts,** of this EIR for analysis of cumulative impacts.

IMPACTS AND MITIGATION MEASURES

This section describes generalized geology and seismicity impacts associated with implementation of the projects listed in the RTP.

Unstable Soils/Liquefaction/Erosion/Landslides

Impact G-1: Implementation of certain RTP projects may be located on potentially unstable soils, in areas of high liquefaction or erosion potential, or in areas subject to landslides. This is considered a **Class II, significant but mitigable**, impact.

Construction and operation of some roadways and bikeways included in the RTP could be prone to slope stability, soil, and liquefaction hazards. Bridges are less susceptible to such hazards. These hazards could be exacerbated through grading associated with transportation projects and construction of such projects on unconsolidated fill. The nature of these hazards, and their potential impacts, are described below.

Liquefaction

Liquefaction potential is widespread throughout the county, particularly in lower-lying valleys overlaid by alluvium. Such areas are also typically characterized by high groundwater. This condition is most prevalent in the coastal areas of the county. Several of the county's major roadways and urban centers are located in such areas. Consequently, nearly all RTP projects involving structural change or new facilities could be subject to liquefaction and high groundwater hazards. Expansive soils have a clay content and mineralogy that renders them susceptible to volume increase upon absorption of water and volume decrease upon dehydration. Repeated cycles of wetting and drying of expansive soils can cause damage to roadways, foundations, and concrete flatwork.

Compressible soils include soils with a high organic content, those with a low density and fine-grained porous texture, and uncompacted or poorly compacted fill. Soil collapse, also referred to as hydroconsolidation, is a term descriptive of the relatively rapid settlement of certain soils upon saturation. Soils prone to collapse include low-density, porous sands and silts deposited in an arid and/or semi-arid environment. The effect of soil compression or collapse is settlement of the ground surface with a resultant potential to damage foundations of structures and other improvements. Potential impacts related to soil stability and collapsible/compressible soils for the majority of the projects are unlikely, as such geologic conditions are not prevalent in the county. However, impacts are considered **potentially significant**, and each project would require a more thorough evaluation as it would occur.

2019 RTP Goals, Policies, and/or Strategies that Serve to Reduce Potential Impacts

There are no specific RTP goals or policies addressing project impacts related to liquefaction. At the time of specific project-level environmental review, the lead agency shall ensure compliance with the following mitigation measure to reduce impacts to a less than significant level:

Mitigation Measures

MM G-1(a): Where an RTP project is located in an area of moderate to high liquefaction potential, as determined by a certified geotechnical engineer , the lead agency shall ensure that structures are designed based upon geology, soils, and earthquake engineering studies. Possible design measures include deep foundations, pile driving, removal of liquefiable materials, and dewatering.

Compliance with the above mitigation measure should ensure that impacts related to liquefaction would be reduced to a **less than significant** level.

Landslide

Roadway projects in mountainous areas or along steeply sloped streambanks, particularly adjacent to areas of unstabilized cut or fill are subject to landslide. Landslides, including rockfalls, can pose a risk to human life or damage facilities or cars and bicycles using the facilities, resulting in a **potentially significant** impact. Landslides can cause temporary road closures to allow cleanup and repair, if necessary. Such closures would necessitate detours, which in turn may cause temporary congestion on detour routes. It should be noted that projects listed in the RTP would involve slope stabilization and repair that would reduce potential impacts.

2019 RTP Goals, Policies, and/or Strategies that Serve to Reduce Potential Impacts

There are no specific RTP goals or policies addressing project impacts related to landslides. At the time of specific project-level environmental review, the lead agency shall ensure compliance with the following mitigation measures, through placement of conditions of approval on applicable projects, to reduce impacts to a less than significant level.

Mitigation Measures

MM G-1(b): The lead agency of a particular RTP project involving cut slopes over 20-feet in height or located in areas of bedded or jointed bedrock as determined by a certified geotechnical engineer shall ensure that specific slope stabilization studies are conducted. Possible stabilization methods include buttresses, retaining walls, and soldier piles.

Compliance with the above mitigation measure would ensure that impacts related to landslide would be reduced to a **less than significant** level.

Soil Erosion

Soil erosion is the removal of soil by water and wind. The rate of erosion is estimated from four soil properties: texture, organic matter content, soil structure, and permeability data. Other factors that influence erosion potential include the amount of rainfall and wind, the length and steepness of the slope, and the amount and type of vegetative cover. Structures and facilities constructed on these soils, as well as users of the facilities, could be exposed to hazards related to erosion, resulting in a **potentially significant** impact.

2019 RTP Goals, Policies, and/or Strategies that Serve to Reduce Potential Impacts

There are no specific RTP goals or policies addressing project impacts related to soil erosion. At the time of specific project-level environmental review, the lead agency shall ensure compliance with the following mitigation measures, through placement of conditions of approval on applicable projects, to reduce impacts to a less than significant level.

Mitigation Measures

MM G-1(c): The lead agency of an RTP project located in an area of highly expansive, collapsible, or compressible soils shall ensure that a specific investigation and appropriate design factors are implemented.

MM G-1(d): The lead agency of an RTP project involving deep foundations or underground areas located in an area of high groundwater potential shall ensure that appropriate

construction techniques, such as dewatering, special waterproofing, and deeper foundations, are included.

MM G-1(e): The lead agency of an RTP project involving deep foundations or underground areas located in an area of moderate or high erosion potential shall ensure that a grading and erosion control plan that minimizes erosion and sedimentation be prepared and implemented by the project proponent, prior to issuance of grading permits. The grading and erosion control plan shall include the following:

a. Methods such as retention basins, drainage diversion structures, spot grading, silt fencing/coordinated sediment trapping, straw bales, and sandbags shall be used to minimize erosion on slopes and siltation into waterways during grading and construction activities.

b. Graded areas shall be revegetated within four weeks of grading activities with deep-rooted, native, drought-tolerant species to minimize slope failure and erosion potential. Geotextile binding fabrics shall be used if necessary to hold slope soils until vegetation is established.

c. Exposed areas shall be stabilized to prevent wind and water erosion, using methods approved by the SLOAPCD.

d. Landscaped areas adjacent to structures shall be graded so that drainage is away from structures.

e. Grading on slopes steeper than 5:1 shall be designed to minimize surface water runoff.

f. Fills placed on slopes steeper than 5:1 shall be properly benched prior to placement of fill.

g. Brow ditches and/or berms shall be constructed and maintained above all cut and fill slopes.

h. Cut and fill benches shall be constructed at regular intervals.

i. Excavation and grading shall be limited to the dry season of the year (typically April 15 to November 1, allowing for variations in weather) unless an approved erosion control plan is in place and all measures therein are in effect.

Compliance with the above mitigation measures would ensure that impacts related to soil erosion would be reduced to a **less than significant** level.

Fault Rupture/Ground Shaking

Impact G-2: Implementation of certain RTP projects could be subject to seismic hazards, including fault rupture and ground shaking. This is considered a **Class II, significant but mitigable**, impact.

Fault rupture can occur along or immediately adjacent to faults during an earthquake. Fault rupture is characterized by ground cracks and displacement that could endanger life and property. Damage is typically limited to areas close to the moving fault. Should fault rupture occur within a RTP project site, it would be considered a **potentially significant** impact.

Ground shaking effects are also the result of an earthquake, but the impacts can be much more widespread. Although a function of earthquake intensity, ground shaking effects can be greatly magnified by the underlying soils and geology, which may amplify shaking at great distances. It is difficult to predict the magnitude of ground shaking following an earthquake, as shaking can vary widely within a relatively small area. Bridge-type structures are most susceptible to earthquake ground shaking and fault rupture; however, roadways may also be damaged by either phenomenon, resulting in a **potentially significant** impact. Compliance with the following RTP policies would reduce project impacts related to seismic activity:

2019 RTP Goals, Policies, and/or Strategies that Serve to Reduce Potential Impacts

There are no specific RTP goals or policies addressing project impacts related to fault rupture/ground shaking. At the time of specific project-level environmental review, the lead agency shall ensure compliance with the following mitigation measures, through placement of conditions of approval on applicable projects, to reduce impacts to a less than significant level.

Mitigation Measures

MM G-2(a): The lead agency of a particular RTP project shall ensure that all structures be designed and constructed to the latest geotechnical standards. In most cases, this will necessitate site-specific geologic and soils engineering investigations to exceed the code for projects that are identified to be in zones subject to high ground shaking during seismic activity and/or fault rupture zones.

MM G-2(b): The lead agency of a particular RTP bridge or passenger station project shall ensure that these structures are placed in areas outside of fault rupture zones. If avoidance is not possible, detailed geologic and seismic studies must be conducted by a certified geotechnical engineer to locate active or potentially active fault traces. Structures shall then be placed outside of an appropriate setback distance as determined by a certified geotechnical engineer.

Implementation of the above mitigation measures in combination with the RTP policies identified would reduce potential impacts related to seismic activity to a **less than significant** level.

3.8 HAZARDS AND HAZARDOUS MATERIALS

This section describes hazards and hazardous materials affecting San Luis Obispo County. The hazards and hazardous materials setting is primarily based on applicable information provided by the County's 2010 Conservation and Open Space Element (COSE), (SLO County 2010a), the SLOCOG 2010 RTP EIR (SLOCOG 2010), and previous EIRs prepared for projects in San Luis Obispo County.

3.8.1 Existing Setting

Hazards

The residents of San Luis Obispo County are subject to a variety of natural and human-caused hazards. Natural hazards are processes such as earthquakes, landslides, flooding, and wildfires. These natural processes have played an essential role in shaping the topography and landscape of San Luis Obispo County. Human hazards are caused, instead, by humans and are often the consequence of interactions between those human activities and natural disasters. Naturally occurring fires, for example, pose a hazard when human settlements are located in high fire hazard zones or within the urban/wildlands interface. Likewise, naturally occurring floods may pose "hazards" to developments sited within a "100-year" floodplain. Humans also may precipitate natural disasters as a result of their activities, such as through disruption of natural cycles or conditions. This can occur directly, through such activities as deforestation or destruction of coral reefs; or indirectly via activities which trigger climate change and global warming.

Hazardous Materials

The RTP is primarily concerned with man-made hazards associated with the transport, use, and disposal of hazardous materials. While most hazardous material emergency incidents are contained rather quickly and at minimum loss to health and safety, the potential exists for accidents to occur that cannot be easily mitigated.

A variety of effects may be caused by an uncontrolled release of hazardous materials, such as a gas pipeline rupture, a chemical spill from an overturned tanker car, or oil refinery explosion. Events like these are not uncommon. The effects on humans depend on the type and amount of material released. Hazards may be fatal if inhaled, swallowed, or absorbed through skin; some hazardous materials may cause burns to skin and eyes upon contact; material that catches on fire may produce irritating or poisonous gases; and some materials may cause dizziness or suffocation. In addition to the direct human threat, hazardous materials or runoff from fire control may cause pollution and create fire or explosion hazards in sewer systems or other waterway areas.

A large or highly toxic release may require evacuation and limiting access to the affected area. In turn, these actions would require opening temporary shelters, closing streets and highways, and providing public information and instructions through the media and other means. In addition, logistical support would have to be provided to assist hazardous materials response teams in containing the release and with planning efforts to minimize the effects of a hazardous material incident (SLO County 1993).

Nuclear Radiation

Nuclear power plants have emergency plans in place, the intent of which is to prevent, prepare for, or mitigate the consequences should an accident happen. However, these plans are not always fail-safe. Accidents at Nuclear power plants can be minor or catastrophic, such as the case with Fukishima Diachi in Japan in 2010. In this case, there was a loss-of-coolant, which allowed the containment core to heat up and radiation to be released into the atmosphere.

Diablo Canyon Power Plant

The Diablo Canyon Power Plant is an electricity-generating nuclear power plant in Avila Beach. The plant has two nuclear reactors operated by Pacific Gas and Electric. The facility is located on about 750 acres, however; PG&E has acquired thousands of acres as a security buffer, extending north from Port San Luis to Montaña de Oro State Park. The plant supplies the electrical needs of more than 2.2 million people annually. Diablo Canyon is slated to close in 2025. Decommissioning is estimated to take at least ten years and will, consequently, have long-term impacts on the county's transportation system, and the RTP. This EIR only assesses the impacts of projects in the RTP, versus impacts on the RTP from other projects. This fact, however, does not preclude the RTP from considering such impacts.

3.8.2 Regulatory Framework

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, Section 66260.10, of the California Code of Regulations (CCR) as:

> *…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.*

Chemical and physical properties cause a substance to be considered hazardous, including the properties of toxicity, ignitability, corrosivity, and reactivity. These terms are defined in the CCR, Title 22, and Sections 66261.20–66261.24. Factors that influence the health effects of exposure to hazardous material include the dose to which the person is exposed, the frequency of exposure, the exposure pathway, and individual susceptibility.

Federal

The United States Environmental Protection Agency (USEPA) provides leadership in the nation's environmental science, research education, and assessment efforts. The USEPA works closely with other federal agencies, including the Occupational Safety and Health Administration (OSHA), the Department of Transportation (DOT), and the National Institute of Health (NIH), state and local governments and Native American tribes to develop and enforce regulations under existing laws. The USEPA is

responsible for researching and setting national standards for a variety of environmental programs and delegates to states and tribes responsibility for issuing permits and monitoring and enforcing compliance.

Prior to August 1992, the principal agency at the federal level regulating the generation, transport, and disposal of hazardous waste was the USEPA under the authority of the Resource Conservation and Recovery Act (RCRA). As of August 1, 1992, however, the California Department of Toxic Substance Control (DTSC) was authorized to implement the state's hazardous waste management program for the USEPA.

Comprehensive Environmental Response, Compensation, and Liability Act

The Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA), commonly known as Superfund, was enacted by Congress on December 11, 1980. This law created a tax on the chemical and petroleum industries and provided broad federal authority to respond directly to releases or threatened releases of hazardous substances that may endanger public health or the environment. CERCLA established prohibitions and 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.

The law authorizes two kinds of response actions: short-term removals, where actions may be taken to address releases or threatened releases requiring prompt response, and long-term remedial response actions that permanently and significantly reduce the dangers associated with releases or threats of releases of hazardous substances that are serious, but not immediately life-threatening. These actions can be conducted only at sites listed on the USEPA's National Priorities List (NPL).

Resource Conservation and Recovery Act

The Resource Conservation and Recovery Act (RCRA), 42 U.S.C. Sections 6901 et seq. (1976), gave the USEPA the authority to control hazardous waste from "cradle to grave." This includes the generation, transportation, treatment, storage, and disposal of hazardous waste. In addition, the RCRA set forth a framework for the management of non-hazardous wastes. The 1986 amendments to RCRA enabled the USEPA to address environmental problems that could result from underground tanks storing petroleum and other hazardous substances. RCRA focuses only on active and future facilities and does not address abandoned or historical sites (see CERCLA). The Federal Hazardous and Solid Waste Amendments (HSWA) are the 1984 amendments to RCRA that required phasing out land disposal of hazardous waste. Some of the other mandates of this law include increased USEPA enforcement authority, more stringent hazardous waste management standards, and a comprehensive underground storage tank program.

Federal Toxic Substances Control Act

Congress enacted the Toxic Substances Control Act (TSCA) in 1976 (15 U.S.C. Sections 2601 et seq.), to become effective January 1, 1977. The act authorizes the USEPA to secure information on all new and existing chemical substances and to control any of these substances determined to cause an unreasonable risk to public health or the environment. TSCA also includes requirements for the storage, use, and disposal of polychlorinated biphenyl (PCB)-containing materials.

Federal Insecticide, Fungicide, and Rodenticide Act

The primary focus of the 1976 Federal Insecticide, Fungicide, and Rodenticide Act (FIFRA), U.S.C. Sections 136 et seq., was to provide federal control of pesticide distribution, sale, and use. The USEPA

was given authority under FIFRA not only to study the consequences of pesticide usage but also to require users (farmers, utility companies, and others) to register when purchasing pesticides. Through later amendments to the law, users also must take exams for certification as applicators of pesticides. All pesticides used in the United States must be registered (licensed) by the USEPA. Registration assures that pesticides will be properly labeled and that if in accordance with specifications, will not cause unreasonable harm to the environment.

Safe Drinking Water Act

The Safe Drinking Water Act, 42 U.S.C. Sections 300f et seq., was established in 1974 to protect the quality of drinking water in the United States. This law focuses on all waters actually or potentially designed for drinking use, whether from aboveground or underground sources. The act authorized the USEPA to establish safe standards of purity and required all owners or operators of public water systems to comply with primary (health-related) standards. State governments, which assume this power from the USEPA, also encourage attainment of secondary (nuisance-related) standards.

State

The California Environmental Protection Agency (CalEPA) and the State Water Resources Control Board (SWRCB) establish rules governing the use of hazardous materials and the management of hazardous waste. Within CalEPA, the California Department of Toxic Substance Control (DTSC) has primary regulatory responsibility, with delegation of enforcement to local jurisdictions that enter into agreements with the state agency for the management of hazardous materials and the generation, transport, and disposal of hazardous waste.

California Health and Safety Code

San Luis Obispo County is currently responsible for implementing Chapter 6.95 of Division 20 of the California Health and Safety Code (Section 25500 et seq.) relating to hazardous materials release response plans and inventory.

California Water Code

California Water Code Section 231 requires the California Department of Water Resources (DWR) to develop well standards to protect California's groundwater quality. DWR Bulletin 74-81 Water Well Standards: State of California and Bulletin 74-90 (supplement to Bulletin 74-81), California Well Standards, Water Wells, Monitoring Wells, Cathodic Protection Wells, contains the minimum requirements for constructing, altering, maintaining, and destroying these types of wells. The standards apply to all water well drillers in California and the local agencies that enforce them.

Hazardous Waste Control Laws

The California Hazardous Waste Control Laws (HWCL) are the state's equivalent to RCRA and closely parallel RCRA by regulating the generation, storage, transportation, treatment, and disposal of hazardous waste in the state. The primary authority for enforcement of HWCL and RCRA itself lies with the DTSC. The State of California has been granted authorization by the USEPA to administer all regulations under both RCRA and the state's HWCL.

Cal/OSHA

The California Occupational Safety and Health Administration (Cal/OSHA) is responsible for implementing workplace regulations. Cal/OSHA considers an asbestos-containing material (ACM) as one containing at least

1 percent asbestos. A contractor certified by the California Contractor's State License Board to conduct asbestos-related work must perform the removal or disturbance of 100 square feet or more of ACM. Requirements specifically addressing asbestos are contained in Title 8 of the California Code of Regulations (CCR) and in the California Health and Safety Code.

Porter-Cologne Act

At the state level, water quality compliance and liability often revolve around compliance with the California Porter-Cologne Act of 1970, California Water Code Sections 13000 et seq. The Porter-Cologne Act designates the SWRCB and Regional Water Quality Control Boards (RWQCBs) as the state agencies with primary responsibility to protect water quality in California and is the primary vehicle for implementation of California's responsibilities under the federal Clean Water Act. Under the act, SWRCB and RWQCBs must address all discharges of waste that could affect the quality of the waters of the State, including potential nonpoint sources of pollution.

To carry out this mandate, the Porter-Cologne Act grants the SWRCB and the RWQCBs authority and responsibility to adopt plans and policies, to regulate discharges to surface and groundwater, to regulate waste disposal sites, and to require cleanup of discharges of hazardous materials and other pollutants. The act also establishes reporting requirements for unintended discharges of any hazardous substance, sewage, or oil or petroleum product.

Underground Storage of Hazardous Substances Act

In 1983 the California Legislature enacted the Underground Storage of Hazardous Substances Act, Health and Safety Code Chapter 6.7. The intent was "to establish orderly procedures that will ensure that newly constructed underground storage tanks meet appropriate standards and that existing tanks be properly maintained, inspected, tested and upgraded so that the health, property and resources of the people of the state will be protected" (Section 25280 (b)). The primary focus of the act is on protection of groundwater from contamination.

Aboveground Petroleum Storage Act

Shortly after the passage of the Underground Storage of Hazardous Substances Act, the California Legislature recognized that there was no similar statewide program for determining the amount and type of hazardous substances being stored in aboveground tanks. In 1989, the Aboveground Petroleum Storage Act was passed and became effective January 1, 1990. In general, the act requires owners or operators of aboveground petroleum storage tanks to file a storage statement, pay a fee by July 1, 1990, and implement measures to prevent spills.

Senate Bill 1241 (Kehoe 2012)

This legislation, implemented through recent amendments (2019) to the State CEQA Guidelines, imposes additional requirements for the review of wildfire impacts in CEQA documents. These changes are especially relevant, given the devastating 2018 California fires.

Local

San Luis Obispo County General Plan Safety Element

The county has an adopted Safety Element (1999) that discusses emergency preparedness, fire safety, and other safety issues including aircraft and radiation hazards and hazardous materials. The element includes

goals, policies, and implementation measures for guidance and regulation for each safety issue. As stated in the element, it has two basic principles: to be ready for disaster and to manage development to reduce risk. The Safety Element also outlines that the county has an Emergency Operations Plan (EOP), which comprises five emergency response plans, as follows:

1) Earthquake Response Plan
2) Hazardous Materials Emergency Response Plan
3) Dam Failure Evacuation Plan
4) Nuclear Power Plant Emergency Response Plan
5) Storm Emergency Plan

3.8.3 Impacts and Mitigation

Measures

Standards of Significance

A hazard or hazardous materials impact associated with the implementation of the proposed project would be considered significant if it would result in any of the following actions (based on Appendix G of the CEQA Guidelines):

a) Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials.

b) Create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment.

c) Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school.

d) Be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, create a significant hazard to the public or the environment.

e) For a project located within an airport land use plan or, where such a plan has not been adopted, within 2 miles of a public airport or public use airport, result in a safety hazard for people residing or working in the project area.

f) For a project within the vicinity of a private airstrip, result in a safety hazard for people residing or working in the project area.

g) Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan.

h) Expose people or structures to a significant risk of loss, injury, or death involving wildland fires, including where wildlands are adjacent to urbanized areas or where residences are intermixed with wildlands.

Additional requirements for the evaluation of wildfires, were included in the recently-updated (2019) amendments to the CEQA Guidelines. The most important new threshold criteria is the question of, "whether a project's risks exacerbates existing environmental hazards?" An example would be introducing projects into vulnerable areas, such as related to wildfires or erosion. At the same time, the updated Guidelines clarified that CEQA applies to impacts of the proposed project on the environment, not vice-versa (i.e. "reverse" CEQA). This relates to the issue of proposed cross-county crude oil transport via tanker trains, tanker trucks, and/or pipelines, where in recent cases the crude oil is originating from offshore oil production platforms. SLOCOG may consider the implications of such activities in the RTP, however; it is not within the purview of this EIR, given that the RTP would not be creating nor exacerbating an existing hazard. The only exception would be if a project under the RTP were to make people or the environment more vulnerable to a hazard (e.g. exacerbate a risk), and that would not be the case.

Synopsis of new wildfire considerations per 2019 CEQA Guidelines 15126.2(a):

Is or does the project:

- Located near very high fire hazard severity zones?
- Impair adopted emergency response plan?
- Exacerbate wildfire risks due to location?
- Require infrastructure such as fuel breaks, emergency water sources, power lines, etc. that may exacerbate risks?
- Expose people or property to significant risks, including flooding or landslides from slope instability or landslides, as a result of runoff, post-fire instability, or drainage changes?

Methodology

The analysis herein is focused on the potential hazards and hazardous materials impacts associated with implementation of the RTP. It is based on a review of existing data including existing literature, County policies, programs, regulations and other various components, and publicly available documents, including previous EIRs prepared for projects within the county. The analysis recognizes the programmatic nature of the RTP; therefore, it focuses on the potential implications of the proposed policies of the RTP and not on the individual project-level effects of specific projects. The reader is directed to **Section 5.0, Cumulative Impacts,** of this EIR for analysis of cumulative impacts.

Impacts and Mitigation Measures

This section assesses generalized hazards and hazardous materials impacts associated with implementation of the RTP.

Hazardous Materials Exposure through Use, Transport, or Accident

Impact H-1: Implementation of certain RTP projects involve the routine use and transport of certain hazardous materials during construction. However, such use would not appear

to introduce significant impacts, but at least, related to transport, the RTP would improve the condition of some roadways, reducing to some extent the potential for roadway accidents that could result in transport-related hazardous material spills. This would be considered **a Class III, less than significant**, impact

Short-Term Construction-Related

Construction of certain RTP projects may involve the routine transport, use, disposal, or reasonably foreseeable upset and accident conditions of hazardous materials. Construction may result in routine transport of hazardous goods as well as the use of equipment that contains or uses hazardous materials (e.g., diesel-fueled equipment), or the transportation of excavated soil and/or groundwater containing contaminants from areas that are identified as being contaminated. However, the transport and handling of such materials is heavily regulated by local fire and police departments, the USEPA, the California Division of Occupational Safety and Health, and Certified Unified Program Agencies (CUPAs). Unused materials from construction projects can likely be reused on other projects. Materials that cannot be reused would be disposed of and would be regulated by the DTSC under state and federal hazardous waste regulations and the local Hazardous Materials Emergency Response Plan.

In addition, the U.S. Department of Transportation requires the use of hazardous waste manifests to ensure that hazardous wastes are strictly monitored and tracked from the point of generation through ultimate disposal. In addition, the DTSC requires that all hazardous waste transporters be registered. Hazardous waste transporters must also comply with the California Highway Patrol regulations, the California State Fire Marshal regulations, and numerous federal regulations. This would be considered a **less than significant** impact.

Long-Term Operational-Related

With the implementation of the regional transportation network planned for under the RTP, the chances of an accidental release of hazardous materials into the environment could increase, including within a quarter mile of a school. However, hazardous materials transport is subject to federal, state, and local regulations that minimize public safety risks and regulate the proper handling of such materials and their containers. Such transport is monitored by law to ensure local jurisdictions are notified in the event of a release. Federal agencies that regulate hazardous materials and transport include the USEPA, OSHA, and the Food and Drug Administration (FDA). State agencies have parallel, and in some cases more stringent, rules governing the use of hazardous materials. In the long term, any increase in the amount of hazardous materials transport could bring a greater risk of upset or accidents. Implementation of RTP improvement projects would reduce traffic congestion and enhance safety, thereby reducing the risk of an accident involving hazardous materials transport, which has the potential to reduce impacts. At least, impacts would not be expected to be exacerbated and thus considered **less than significant**.

San Luis Obispo County's Diablo Canyon Power Plant is a nuclear power plant located on the coast, north of Avila Beach. While RTP projects would not be affecting the plant itself, certain projects may be in close proximity to the plant. The County's 1999 Safety Element discusses the plant's safety systems; however, it notes that these systems cannot provide absolute certainty that a system failure will not occur. To prepare for potential emergency situations that might develop at the power plant, extensive warning, reporting, and response plans have been developed. The response plan for an emergency at the Diablo Canyon Nuclear Power Plant is contained in a document called the Nuclear Power Plant Emergency

Response Plan. Updated information on this plan is distributed to the public each year, as required by federal law.

The county's Hazardous Materials Emergency Response Plan and the Nuclear Power Plant Emergency Response Plan are intended to reduce the chance of accidents involving hazardous materials transported on the county's roadways. Nevertheless, unforeseen accidents involving hazardous materials transport, including nuclear materials from the Diablo Canyon Nuclear Power Plant, are conceivable. However, the RTP does not increase this risk. Rather, the RTP may even reduce this risk slightly by providing more efficient levels of service on county roadways. Therefore, this impact would be **less than significant**.

2019 RTP Goals, Policies, and/or Strategies that Serve to Reduce Potential Impacts
None required.

Mitigation Measures
None required.

Locate Transport Hazardous Materials Within One-Quarter Mile of a School

Impact H-2: Implementation of the proposed RTP could emit or create a hazard to the public or the environment by locating new or expanded roadways or transit alignments that transport hazardous materials within one-quarter mile of a school. While such projects are not anticipated, the potential, nevertheless, exists. This would be considered a **Class II, significant, but mitigable**, impact.

The RTP includes capital improvement projects through much of the county that would be within a quarter mile of existing school sites. Hazardous materials transported on these roadways could affect these schools if there were to be a release or incident during transportation. However, as previously stated, the RTP invests resources into improved roadway conditions. As a result, the RTP may actually result in beneficial impacts. Accidents may still occur, however; the risk is not exacerbated by the RTP. Due to potential transport on the roadways near schools, this impact is considered to be **significant, but mitigable**.

2019 RTP Goals, Policies, and/or Strategies that Serve to Reduce Potential Impacts
None required.

Mitigation Measures
MM H-2 The lead agency of a particular RTP project shall ensure that the project site, if located within one-quarter-mile of a school, is not listed on the California Department of Toxic Substances Control (DTSC).

Implementation of the above mitigation measure would reduce impacts to a **less than significant** level.

Hazardous Materials Site

Impact H-3: Implementation of certain 2019 RTP projects could create a hazard to the public or the environment through the disturbance of contaminated property during the project-specific implementation. This would be considered a **Class II, significant but mitigable**, impact.

During the construction phases of certain RTP projects, a hazard to the public or the environment could be created through the disturbance of contaminated property. The State Department of Toxic Substances Control (DTSC) lists the known contaminated sites in the county in their DTSC EnviroStor Database. In the absence of appropriate precautions and/or cleanup efforts, certain projects may create the potential for exposing construction workers, the public, or the environment to hazardous materials. Due to the proliferation of contaminated sites and the risk associated with encountering and cleaning up these sites, this impact is considered to be **potentially significant**.

2019 RTP Goals, Policies, and/or Strategies that Serve to Reduce Potential Impacts
There are no specific RTP goals or policies addressing project impacts related to hazardous material sites. At the time of specific project-level environmental review, the lead agency shall ensure compliance with the following mitigation measure, through placement of conditions of approval on applicable projects, to reduce impacts to a less than significant level.

Mitigation Measure

MM H-3: The lead agency shall investigate the potential for improvement projects to be located at, or in the vicinity of, identified Department of Toxic Substances Control (DTSC) hazardous material sites or to be located in areas that contain aerial-deposited lead, naturally occurring asbestos, or other hazardous materials. Site-specific evaluation should include a historical assessment of past uses, and soil sampling should be conducted when determined appropriate by the lead agency. In those instances where a specific project site is found to be contaminated by hazardous materials, the site shall, where appropriate, be cleaned up to the standards of the appropriate regulatory agency. Appropriate remediation measures to ensure worker safety during construction shall, where appropriate, be identified prior to the commencement of earthmoving activities, subject to the review and approval of the DTSC.

Ideally, such "Phase II-type" investigations should be commissioned prior to initiation of the site-specific EIR, and typically in coordination with other affected agencies, such as Regional Water Quality Control Board, Air Pollution Control Board, and County Environmental Health.

Implementation of the above mitigation measures would reduce impacts associated with hazardous material sites to a **less than significant** level.

Proximity to Airport/Airstrip and Wildland Fire Zones

Impact H-4: Implementation of certain RTP projects could be located in or near a fire hazard zone or near an airport/airstrip. This would be considered a **Class III, less than significant**, impact.

As discussed in the County's General Plan, there are very high, high, and medium fire hazard zones located throughout San Luis Obispo County (San Luis Obispo County Safety Element, 1999). It is inevitable that some RTP projects will be in or near one of these zones. In addition, certain RTP projects are in close proximity to working airports/airstrips. However, no projects identified in the RTP involve airport improvements, and none of the projects involve development that would result in an aviation safety hazard for people residing or working in the general vicinity. The County's 1999 Safety Element contains policies and cites individual city policies and regulations pertaining to fire safety and handling response plans for fires and hazards associated with proximity to airports/airstrips. Due to the County's and cities' regulations, this impact is considered **less than significant**.

2019 RTP Goals, Policies, and/or Strategies that Serve to Reduce Potential Impacts
None required.

Mitigation Measures
None required.

Emergency Response/Evacuation Plan

Impact H-5: The construction of roadway projects in the RTP could temporarily interfere with emergency response/evacuation plans. This would be considered a **Class II, significant, but mitigable** impact

As discussed in **Section 3.13, Transportation and Circulation**, emergency access/evacuation plans could potentially be affected during construction activities associated with implementation of the various roadway and transit improvement projects identified in the RTP. However, the implementing agency for each improvement project would be responsible for coordinating with the emergency response providers to ensure that emergency routes remain available during construction activities. The RTP does not propose any specific projects that are believed to result in inadequate emergency access. However, there is still potential for interference or conflicts with emergency vehicles. The project-specific environmental reviews shall analyze this issue further at the site-specific level. In the long term, emergency response times can be expected to improve due to implementation of the RTP through the provision of improved accessibility and circulation.

2019 RTP Goals, Policies, and/or Strategies that Serve to Reduce Potential Impacts
None required.

Mitigation Measures
MM H-5: For all transportation projects that could result in temporary lane closures or access blockage during construction, a temporary access plan shall be implemented, in

consultation with the County Office of Emergency Services (OES), in order to ensure continued access of emergency vehicles, or to carry out an evacuation.

Implementation of the above mitigation measure would reduce impacts to a **less than significant** level.

Additional Wildfire Considerations per 2019 CEQA Guidelines

The following summarizes the questions added to Appendix G of the recent 2019 Amendments to the CEQA Guidelines.

Is or does the project:

- Located near very high fire hazard severity zones?
- Impair adopted emergency response plan?
- Exacerbate wildfire risks due to location?
- Require infrastructure such as fuel breaks, emergency water sources, power lines, etc. that may exacerbate risks?
- Expose people or property to significant risks, including flooding or landslides from slope instability or landslides, as a result of runoff, post-fire instability, or drainage changes?

Advisory

The 2018 CEQA Guidelines became effective on December 28, 2018, well after the Notice of Preparation (NOP) was released for this EIR in January, 2018. This document is not required to implement the new Guidelines, ex post facto. However, from a programmatic standpoint, all of the above issues are relevant to the proposed RTP and all have the potential to result in significant environmental impacts. Projects covered by this Programmatic EIR will require subsequent environmental review (CEQA and/or NEPA), at which time these issues will be required to be specifically addressed. Although some of these topics have already been addressed to some degree in this chapter, these issues would need to be analyzed in greater depth as part of project-specific CEQA/NEPA review. It is envisioned that there will be additional legislation forthcoming as well regarding wildfire and flooding hazards and so, it would be prudent in subsequent project-specific CEQA/NEPA documents to address such impacts in a separate chapter altogether, focusing upon "Natural Hazards, apart from the topic of "Hazardous Materials." This would help ensure adequate focus and coverage of this issue.

3.9 LAND USE/CONSISTENCY WITH PLANS AND POLICIES

This section of the EIR describes land use in the county and analyses potential impacts and mitigation measures. The land use setting is primarily based on applicable information provided by the County's 2010 Conservation and Open Space Element (COSE), and previous EIRs prepared for projects in San Luis Obispo County.

Regional and Local Setting

San Luis Obispo County is located on the California Central Coast between Monterey County to the north and Santa Barbara County to the south. The county's coastline spans 96 miles and the land area encompasses over two million acres of mostly agricultural and open space land. Incorporated cities in the county include Atascadero, Arroyo Grande, Grover Beach, Morro Bay, Paso Robles, Pismo Beach, and San Luis Obispo. Communities include Avila Beach, California Valley, Callendar-Garrett, Cambria, Cayucos, Creston, Heritage Ranch, Los Berros, Los Osos, San Miguel, Oak Shores, Oceano, Nipomo, Palo Mesa, Pozo, Shandon, San Simeon, Santa Margarita, Whitley Gardens, and Woodlands. Urban areas are connected to State Route (SR) 1 and US 101, the primary transportation corridors serving the Central Coast.

Land Use Patterns

The majority of land in the county is used for agriculture (approximately 66 percent). Most of the remaining land in the unincorporated county is used for rural land uses (approximately 14 percent) and open space (approximately 10 percent). Open space comprises large areas that extend northwest-southeast in the southern portion of the county's central area. Approximately 9 percent of the county's land is designated as incorporated city, residential, public facility, recreation, industrial, commercial, office, or multi-use.

Urban concentrations of development in the county are located in its seven incorporated cities as well as in community areas. In general, development in the county is concentrated in the more level valleys. In the North County, the Salinas River Valley provides the opportunity for a growing urban corridor between Paso Robles and Atascadero. The primary issue in this area is continued residential development and potential land use conflicts with agriculture, including an increasing number of acres planted in vineyards.

For the purposes of the RTP, the county can be divided into five subregions: North Coast, Central County, North County, South County, and East County. The North Coast Subregion, which includes the City of Morro Bay and the communities of Cambria, Cayucos, Los Osos/Baywood Park, and San Simeon, is primarily a rural corridor. The Central County Subregion, which includes the City of San Luis Obispo and the community of Avila Beach, has historically been the center of economic and government activity in the county. San Luis Obispo is the largest city in the county with 47,541 people and 44% of all the jobs in the region. The North County Subregion, which includes the cities of Atascadero and Paso Robles and the communities of Santa Margarita and Templeton, contains vast areas of agricultural and open space with distinct urban concentrations. The South County Subregion, which includes the cities of Arroyo Grande, Grover Beach, and Pismo Beach and the communities of Nipomo and Oceano, contains diverse land uses, ranging from urban uses in the Five Cities area and surrounding the Tefft Street interchange on US 101 in Nipomo to rural residential and agricultural uses in the foothill and Nipomo Mesa areas

(SLOCOG 2001a-d). East County is sparsely populated and includes no incorporated cities or census-designated communities; it was designated as a federal non-attainment area for the National Ambient Air Quality Standard (NAAQS) eight-hour ozone in 2012.

3.9.2 Regulatory Framework

State

State Parks

Areas within the State Parks system include the following sites: New Hearst Property, Cayucos State Beach, Estero Bluffs, Los Osos Oaks State Reserve, Montaña de Oro State Park, Morro Bay State Park, Morro Bay State Park Museum of Natural History (Morro Bay State Park Golf Course), Pismo State Beach, Oceano Dunes State Vehicular Recreation Area (SVRA), San Simeon State Park, and W.R. Hearst Memorial State Beach.

Regional

San Luis Obispo Air Pollution Control District Clean Air Plan

While the cities and county do not participate directly in developing the Clean Air Plan, local land use decisions affect air quality. This Plan contains a list of transportation control measures (TCMs) and land use management strategies designed to reduce air quality impacts of urban development. The success of these measures is dependent on their adoption and implementation by the cities and county.

San Luis Obispo Local Agency Formation Commission (LAFCo) and the Cortese-Knox-Hertzberg Local Government Reorganization Acts

The Cortese-Knox-Hertzberg Local Government Reorganization Acts of 1985 and 2000 govern the incorporation of new cities and boundaries. The act gives authority to the Local Agency Formation Commission (LAFCO) in each county to consider proposals for incorporation and annexations. The act also established five criteria for determining the quality of agricultural lands. Land is defined as prime agricultural land if it meets any of the listed criteria (Section 56064).

Local

San Luis Obispo County Existing General Plan

The General Plan is a long-range plan comprising seven required elements. The Land-Use Element is the element which most directly influences land-use. This is accomplished, both, through policy statements, as well as the land use map. Development projects, including transportation projects are subject to a finding of consistency with the General Plan.

Area Plans and Standards

Area Plans are a sub-set of the General Plan, covering specific geographical areas of the unincorporated county areas. Area Plans contain policies and land-use designations, in addition to oftentimes, development standards. Area Plans include detailed descriptions of the County's planning areas, specific programs, and associated Standards intended to address local planning issues. The Area Plans also provide maps showing detailed overlays of environmental concern, called Combining Designations. This overlay distinction requires special design and/or development considerations to provide for more detailed review when necessary for environmental issues such as sensitive habitats and flood hazards.

San Luis Obispo County Land Use Ordinance
The Land Use Ordinance implements the County's General Plan. The County's land use designations are divided into two Land Use Ordinances – Inland and Coastal. Inland uses are governed by the Inland Land Use Ordinance (Title 22). Coastal uses are governed by the Coastal Land Use Ordinance (Title 23) in compliance with the California Coastal Act. Both land use ordinances provide specific land use definition, standards, and thresholds consistent with the goals and policies of the adopted General Plan, including land use standards from the Area Plans.

San Luis Obispo County Design Plans
New development within the communities of Cambria, San Miguel, Santa Margarita, and Templeton and in the West Tefft Corridor are guided by individual design plans, which have been adopted by the Board of Supervisors.

San Luis Obispo County Strategic Growth Principles
The Strategic Growth Principles are Overall planning guidelines intended to encourage sustainable development, as envisioned when the "Principles" were initially adopted in 2005. The principles seek to achieve the County's vision and mission "to enhance the economic, environmental, and social quality of life in San Luis Obispo County." The Guiding Principles for Strategic Growth are as follows:

- Strengthen regional cooperation
- Preserve open space, farmland, natural beauty, and critical environmental areas
- Strengthen and direct development toward existing communities
- Foster distinctive, attractive communities with a strong sense of place
- Provide a variety of transportation and land use choices
- Create a range of housing opportunities and choices
- Encourage mixed land uses
- Create walkable neighborhoods and towns
- Take advantage of compact building design
- Make development decisions predictable, fair, and cost effective
- Encourage community and stakeholder collaboration

City General Plan Policies
The seven incorporated cities (Arroyo Grande, Atascadero, Grover Beach, Morro Bay, Paso Robles, Pismo Beach, and San Luis Obispo) in San Luis Obispo County are not subject to the policies and regulations set out by the County's General Plan. The incorporated areas' respective general plans and ordinances, which are tailored to land use development issues within their planning areas, regulate lands in these jurisdictions.

Regional Plans
In 2008, the SLOCOG Board approved the *Community 2050 Regional Blueprint*. This served as the initial SLOCOG plan that integrated land use and transportation. The "Blueprint" aided in developing base principles and target development areas for the 2010 RTP and preliminary SCS. In developing this Blueprint, SLOCOG worked closely with the County of San Luis Obispo, seven incorporated cities, SLO County APCD, SLO County LAFCO, and various community services districts.

In 2010, SLOCOG used this blueprint effort and its defined Target Development Areas (TDAs) to adopt the *2010 RTP*/preliminary SCS. This effort projected anticipated GHG emission reductions through the decrease in vehicle miles traveled (VMT) as a result of implementation of a comprehensive intermodal transportation investment strategy and better connections between land use and transportation projects. The 2010 RTP/pSCS achieved an 8% GHG per capita reduction.

Adopted in 2015, the 2014 RTP/SCS re-evaluated projected reductions using improved land use, transportation and air quality modeling. The foundation of the 2014 RTP/SCS lay in better connecting communities through intermodal investments to our highway, transit, bicycle/pedestrian, and road networks, to our homes, schools, work, shopping, and other activities. This plan was also based on the "Blueprint" effort, TDAs, and an updated *US 101 Corridor Mobility Master Plan* (2014) that laid out a comprehensive corridor approach that included transportation demand management, public transportation, parallel route development, multimodal investments, and mainline operational and access improvements. The 2014 RTP/SCS achieved, and surpassed, the GHG reduction targets through an aggressive, but achievable approach almost reaching an 11% GHG per capita reduction.

3.9.3 Impacts and Mitigation

Measures

Standards of Significance

A land use impact is considered significant if implementation of the project would result in any of the following (based on State CEQA Guidelines Appendix G):

a) Physically divide an established community.

b) Conflict with any applicable land use plan, policy, or regulation of an agency with jurisdiction over the project (including, but not limited to, the general plan, specific plan, or zoning ordinance) adopted for the purpose of avoiding or mitigating an environmental effect.

c) Conflict with an adopted conservation plan or natural community conservation plan.

Methodology

The analysis herein is focused on the potential land use impacts associated with implementation of the 2019 RTP. The analysis is based on a review of existing planning documents, including the various components and policies of the County General Plan and other County regulations affecting planning and implementation of the proposed RTP. The analysis recognizes the programmatic nature of the RTP; therefore, it focuses on the potential implications of the proposed policies of the RTP and not on the individual project-level effects of specific projects. The reader is directed to **Section 5.0, Cumulative Impacts,** of this EIR for analysis of cumulative impacts.

Impacts and Mitigation Measures

This section describes generalized land use impacts associated with implementation of the projects listed in the RTP.

Physically Divide an Established Community (Accessibility and Displacement)

Accessibility

Impact LU-1: During construction, many RTP projects would result in temporary lane closures or other access restrictions that could disrupt existing residences, businesses, and pedestrian, bicycle, and transit routes. This is considered a **Class II, significant but mitigable**, impact.

During construction on both new and existing roadways, homes and businesses may be temporarily disrupted through road or lane closures, or blockage of access to parking. Bicycle and pedestrian access could also be disrupted. Temporary disruption of bicyclists, pedestrians, homes, and/or businesses would be considered a **potentially significant** impact.

2019 RTP Goals, Policies, and/or Strategies that Serve to Reduce Potential Impacts

This EIR incorporates the 2019 RTP's goals, policy objectives, and action strategies as listed in 2019 RTP Chapter 3 which is included in Volume II, Technical Appendices. Included action strategies serve to: Improve accessibility to goods, services and jobs and facilitate safe and convenient alternative forms of transportation. Plan, develop, and maintain a comprehensive, integrated, intermodal transportation system that allows convenient, flexible and efficient use of all transportation alternatives to substantially reduce the rate of growth in vehicle trips and vehicle miles traveled and increase the use of alternative transportation modes.

In addition, at the time of specific project-level environmental review, the lead agency shall ensure compliance with the following mitigation measure, through placement of conditions of approval on applicable projects, to reduce impacts to a **less than significant** level.

Mitigation Measures

MM LU-1: For all transportation projects that could result in temporary lane closures or access blockage during construction, a temporary access plan shall be implemented to ensure continued access to affected bicyclists, pedestrians, homes and/or businesses. The plan shall include, but not be limited to, temporary signage directing traffic and providing safe access in and around construction zone, as well as shuttles to take bicyclists and pedestrians beyond the active construction zones.

Compliance with the above mitigation measure would ensure that impacts affecting temporary disruption of bicyclists, pedestrians, homes, and/or businesses would be reduced to a **less than significant** level. However, this does not preclude possible significant land-use impacts, arising from, for example, long-term construction. This can only be determined at the project-specific level.

Displacement

This is considered to be a less than significant impact. Please refer to the discussion under Impact POP-2 (Section 3.12 Population, Housing and Unemployment) of this EIR.

2019 RTP Goals, Policies, and/or Strategies that Serve to Reduce Potential Impacts
None.

Mitigation Measures

None required.

Consistency with Planning Documents

Impact LU-2: The 2019 RTP includes policies that guide development under the plan. Policies in the RTP are consistent with other regional and local transportation policies. This would be considered a **Class III, less than significant**, impact.

A basic premise of the RTP Policy Element is that the focus of programs and policies are consistent with the intent of the general plans and local coastal plans of the county and seven cities within the county, recognizing the interdependence of local and regional transportation and land use planning. The Policy Element of the RTP describes the goals and policies that guide facility development under the RTP. The vision of the RTP is:

> *A fully integrated, intermodal, transportation system that facilitates the safe and efficient movement of people, goods, and information within and through the region.*

Figure 3.9-1: RTP Goals & Policy Objectives

GOAL	#	POLICY OBJECTIVES
Preservation		
1. Preserve the transportation system	1.1	Maintain and maximize efficiency of existing transportation system and operations.
	1.2	Employ low-cost solutions whenever possible, including transportation demand management principles.
	1.3	Preserve the region's transportation system to a state of good repair.
Mobility		
2. Improve intermodal mobility and accessibility for all people	2.1	Provide reliable, integrated, and flexible travel choices across and between modes.
	2.2	Improve opportunities for businesses and citizens to easily access goods, jobs, services, and housing.
	2.3	Integrate new technologies and concepts to make the transportation system more efficient and accessible.
	2.4	Identify and improve major transportation corridors for all users.
	2.5	Support cooperative planning activities that lead to an integrated intermodal transportation system.
Economy		
3. Support a vibrant economy	3.1	Support transportation investments and choices to enhance economic activity, travel, and tourism.
	3.2	Improve the freight network and strengthen the region's ability to access national and international trade markets.
Safety		
4. Improve public safety and security	4.1	Reduce fatalities, serious injuries, and collisions for motorized and non-motorized users.
	4.2	Reduce congestion and increase safety by improving operations.
	4.3	Enhance public safety and security in all modes of transportation.

Healthy Communities		
5. Foster livable, healthy communities and promote social equity	5.1	Reflect community values while integrating land use and transportation planning to connect communities through a variety of transportation choices that promote healthy lifestyles.
	5.2	Integrate public health and social equity in transportation planning and decision-making.
	5.3	Support efforts to increase the supply and variety of housing, jobs, and basic services in locations that reduce trips, travel distances, and congestion on U.S. Route 101.
	5.4	Make investments and develop programs that support local land use decisions that implement the SCS and other strategies to reduce GHG emissions and make our communities more healthy, livable, sustainable, and mobile.
Environment		
6. Practice environmental stewardship	6.1	Integrate environmental considerations in all stages of planning and implementation.
	6.2	Preserve aesthetic resources and promote environmental enhancements.
	6.3	Reduce GHG emissions from vehicles and improve air quality in the region.
	6.4	Conserve and protect natural, sensitive, and agricultural resources.
Fiscally Responsible		
7. Practice financial stewardship	7.1	Invest strategically to optimize transportation system performance for the long-term.
	7.2	Assure early and continual involvement of all parties affected by major transportation improvement projects and programs.
	7.3	Seek sustainable, flexible, and competitive funding to maintain and improve the transportation system.

In general, the RTP encourages a multimodal transportation network. Emphasis is placed on non-motorized vehicles, in part to reduce traffic congestion and air quality impacts associated with automobile use. Action Strategies in the RTP would minimize environmental impacts and conserve energy to the extent possible, insofar as they preferentially encourage non-motorized transportation. This approach is consistent with local transportation goals and policies of all the general plans in the county, which are similarly framed. Policies are also consistent with the San Luis Obispo County Air Pollution Control District (SLOAPCD) Air Quality Management Plan (AQMP), which promotes similar policies emphasizing alternative fuels and alternative transportation modes. Strategies in the RTP also emphasize coordination and consistency with applicable land use plans. Based on this analysis, the RTP is found to be consistent with both regional and local transportation goals and policies, resulting in a **less than significant** impact.

Note that growth-inducing impacts of the RTP are described in **Section 6.0, Other Sections Required by CEQA**, of this EIR.

Mitigation Measures

None required.

Conflict with an Adopted Conservation Plan or Natural Community Conservation Plan

This impact is considered to be **less than significant with mitigation**. The reader is referred to the Biological Resources Section and **Impact B-3**

Land Use Conflicts

Impact LU-3: Implementation of certain RTP projects may create land use conflicts with existing sensitive land uses and/or residential development. This is considered a **Class II, significant but mitigable**, impact.

The RTP includes roadway projects that could result in physical land use impacts with existing development. Such impacts could include an increase in noise, lighting conflicts with neighboring uses, or a degradation of public safety or air quality. Projects with the potential to create these kinds of impacts include construction of new facilities in proximity to noise-sensitive uses, road extensions and widenings, and airport improvements that may ultimately increase air traffic or change flight patterns.

Land use conflicts associated with RTP improvements are considered **potentially significant**. Such impacts would be most common in urban areas, particularly in areas where roadway widenings and intersection improvements are envisioned. Impacts would be most pronounced in residential areas or in areas with schools, parks, or other land uses with large numbers of children or elderly people, who are most sensitive to noise impacts. Please note that additional impacts related to noise are described in **Section 3.10** and additional impacts related to lighting are described in **Section 3.1** of this EIR. The following RTP policy would reduce project impacts related to land use compatibility.

2019 RTP Goals, Policies, and/or Strategies that Serve to Reduce Potential Impacts
This EIR incorporates the 2019 RTP's goals, policy objectives, and action strategies as listed in 2019 RTP Chapter 3 which is included in Volume II, Technical Appendices. Included action strategies serve to: Encourage Caltrans and local jurisdictions to include socially and environmentally sensitive design, routing and maximum feasible mitigation of impacts in all roadway construction.

In addition, at the time of specific project-level environmental review, the lead agency shall ensure compliance with the following mitigation measures, through placement of conditions of approval on applicable projects, to reduce impacts to a less than significant level.

Mitigation Measures

MM LU-3(a): The lead agency of a particular 2019 RTP project shall ensure that setbacks, fences, or other appropriate means shall be used to separate transportation facilities with the potential to generate land use conflicts from adjacent sensitive land uses. Roadways shall be designed to minimize potential impacts to pedestrians and bicyclists, particularly those living in adjacent residential areas or attending nearby schools. Adequate striping, signs, and signalization shall be installed to slow traffic, where appropriate, and to reduce safety and noise impacts.

MM LU-3(b): The lead agency of a particular 2019 project shall ensure that street lighting, where necessary, is minimized to the extent possible in areas adjacent to sensitive land uses. Streetlights shall be shielded and oriented away from residential development.

Implementation of the above mitigation measures would be expected to reduce land use conflicts to a **less than significant** level.

3.10 NOISE

This section of the EIR describes noise environment within San Luis Obispo County. The noise setting is primarily based on applicable information provided by the General Plan and Area Plans, the County's 2010 Conservation and Open Space Element (COSE), the Noise Element of the General Plan (SLO County 1992), and previous EIRs prepared for projects in San Luis Obispo County.

3.10.1 Existing Setting

Noise

Noise is generally defined as sound that is loud, disagreeable, or unexpected. Sound is mechanical energy transmitted in the form of a wave because of a disturbance or vibration. Sound levels are described in terms of both amplitude and frequency. The following is a brief discussion of fundamental noise concepts.

Amplitude

Amplitude is defined as the difference between ambient air pressure and the peak pressure of the sound wave. Amplitude is measured in decibels (dB) on a logarithmic scale. For example, a 65 dB source of sound, such as a truck, when joined by another 65 dB source results in a sound amplitude of 68 dB, not 130 dB (i.e., doubling the source strength increases the sound pressure by 3 dB). Amplitude is interpreted by the ear as corresponding to different degrees of loudness. Laboratory measurements correlate a 10 dB increase in amplitude with a perceived doubling of loudness and establish a 3 dB change in amplitude as the minimum audible difference perceptible to the average person.

Frequency

The frequency of a sound is defined as the number of fluctuations of the pressure wave per second. The unit of frequency is the Hertz (Hz). One Hz equals one cycle per second. The human ear is not equally sensitive to sound of different frequencies. For instance, the human ear is more sensitive to sound in the higher portion of this range than in the lower and sound waves below 16 Hz or above 20,000 Hz cannot be heard at all. To approximate the sensitivity of the human ear to changes in frequency, environmental sound is usually measured in what is referred to as "A-weighted decibels" (dBA). On this scale, the normal range of human hearing extends from about 10 dBA to about 140 dBA. Common community noise sources and associated noise levels, in dBA, are depicted in **Figure 3.10-1** provided by Caltrans *Standard Environmental Reference* (August 2017).

Addition of Decibels

Because decibels are logarithmic units, sound levels cannot be added or subtracted through ordinary arithmetic. Under the decibel scale, a doubling of sound energy corresponds to a 3 dB increase. In other words, when two identical sources are each producing sound of the same loudness, the resulting sound level at a given distance would be 3 dB higher than one source under the same conditions. For example, if one automobile produces a sound level of 70 dB when it passes an observer, two cars passing simultaneously would not produce 140 dB; rather, they would combine to produce 73 dB. Under the decibel scale, three sources of equal loudness together would produce an increase of 5 dB.

Sound Propagation and Attenuation

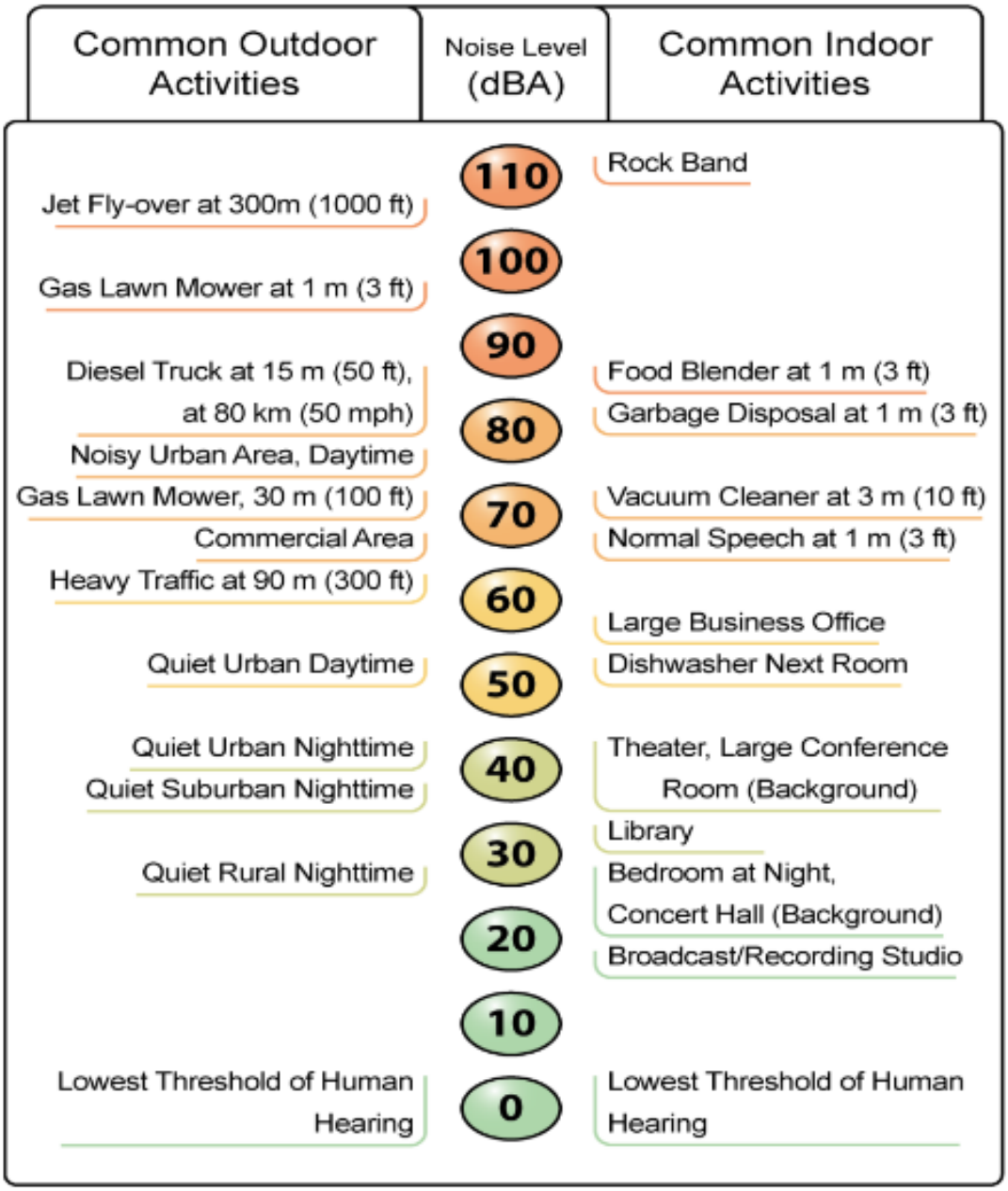
Geometric Spreading. Sound from a localized source (i.e., a point source) propagates uniformly outward in a spherical pattern. The sound level decreases (attenuates) at a rate of approximately 6 decibels for each doubling of distance from a point source. Highways consist of several localized noise sources on a defined path and hence can be treated as a line source, which approximates the effect of several point sources. Noise from a line source propagates outward in a cylindrical pattern, often referred to as cylindrical spreading. Sound levels attenuate at a rate of approximately 3 dB for each doubling of distance from a line source, depending on ground surface characteristics. For acoustically hard sites (i.e., sites with a reflective surface between the source and the receiver, such as a parking lot or body of water), no excess ground attenuation is assumed. For acoustically absorptive or soft sites (i.e., those sites with an absorptive ground surface between a line source and the receiver, such as soft dirt, grass, or scattered bushes and trees), an excess ground attenuation value of 1.5 dB per doubling of distance is normally assumed. When added to the cylindrical spreading, the excess ground attenuation for soft surfaces results in an overall attenuation rate of 4.5 dB per doubling of distance from a line source.

Atmospheric Effects. Receptors located downwind from a source can be exposed to increased noise levels relative to calm conditions, whereas locations upwind can have lowered noise levels. Sound levels can be increased at large distances (e.g., more than 500 feet) from the highway due to atmospheric temperature inversion (i.e., increasing temperature with elevation). Other factors such as air temperature, humidity, and turbulence can also have significant effects.

Shielding by Natural or Human-Made Features. A large object or barrier in the path between a noise source and a receiver can substantially attenuate noise levels at the receiver. The amount of attenuation provided by shielding depends on the size of the object and the frequency content of the noise source. Natural terrain features (e.g., hills and dense woods) and human-made features (e.g., buildings and walls) can substantially reduce noise levels. Sound Walls are often constructed specifically to reduce noise levels along highway sections that abut residential development. These barriers, depending upon location, can have an adverse visual effect. Consequently, sometimes mitigation for noise can result in significant aesthetic/visual impacts, as well as, in some cases, community character-related land-use impacts.

Noise Descriptors. The decibel scale alone does not adequately characterize how humans perceive noise. The dominant frequencies of a sound have a substantial effect on the human response to that sound. Although the intensity (energy per unit area) of the sound is a purely physical quantity, the loudness or human response is determined by the characteristics of the human ear. Human hearing is limited in the range of audible frequencies as well as in the way it perceives the sound-pressure level in that range. In general, people are most sensitive to the frequency range of 1,000–8,000 Hz and perceive sounds within that range better than sounds of the same amplitude in higher or lower frequencies. To approximate the response of the human ear, sound levels of individual frequency bands are weighted, depending on the human sensitivity to those frequencies, which is referred to as the A-weighted sound level (dBA).

Figure 3.10-1: Common Noise Levels



Source: California Department of Transportation *Standard Environmental Reference* (August 2017).
dBA = A-weighted decibels
ft = foot/feet
m = meter(s)
mph = miles per hour

The intensity of noise fluctuates over time, and several descriptors of time-averaged noise levels are typically used. For the evaluation of environmental noise, the most commonly used descriptors are L_{eq}, L_{dn}, CNEL, and SEL. The energy-equivalent noise level, L_{eq}, is a measure of the average energy content (intensity) of noise over any given period. Many communities use 24-hour descriptors of noise levels to regulate noise. The day-night average noise level, L_{dn}, is the 24-hour average of the noise intensity, with a 10-dBA "penalty" added for nighttime noise (10 p.m. to 7 a.m.) to account for the greater sensitivity to noise during this period. CNEL, the community equivalent noise level, is similar to L_{dn} but adds an additional 5 dBA penalty for evening noise (7 p.m. to 10 a.m.). CNEL is also generally used to describe noise levels associated with airport traffic.

Another descriptor that is commonly discussed is the single-event noise exposure level, also referred to as the sound-exposure level, expressed as SEL. The SEL describes a receiver's cumulative noise exposure from a single noise event, an acoustical event of short duration (0.5 second), such as a backup beeper, the sound of an airplane traveling overhead, or a train whistle. This also includes "impact noise," for example associated with pile driving. Noise from pile driving, such as involving bridge construction, can be heard over long distances. Pile driving also cause vibratory impacts to structures. Another source of vibratory noise is transportation-related tunnel construction and specifically related to tunnel boring machines, as well as blasting.

Common noise level descriptors are summarized in **Figure 3.10-2**.

Figure 3.10-2: Common Acoustical Descriptors

Descriptor	Definition
Energy Equivalent Noise Level (L_{eq})	The energy mean (average) noise level. The instantaneous noise levels during a specific period of time in dBA are converted to relative energy values. From the sum of the relative energy values, an average energy value (in dBA) is calculated.
Minimum Noise Level (L_{min})	The minimum instantaneous noise level during a specific period of time.
Maximum Noise Level (L_{max})	The maximum instantaneous noise level during a specific period of time.
Day-Night Average Noise Level (DNL or L_{dn})	The DNL was first recommended by the USEPA in 1974 as a "simple, uniform and appropriate way" of measuring long term environmental noise. DNL takes into account both the frequency of occurrence and duration of all noise events during a 24-hour period with a 10 dBA "penalty" for noise events that occur between the more noise-sensitive hours of 10 p.m. and 7 a.m. In other words, 10 dBA is "added" to noise events that occur in the nighttime hours to account for increases sensitivity to noise during these hours.
Community Noise Equivalent Level (CNEL)	The CNEL is similar to the L_{dn} described above, but with an additional 5 dBA penalty added to noise events that occur between the hours of 7 p.m. and 10 p.m. The calculated CNEL is typically approximately 0.5 dBA higher than the calculated L_{dn}.
Single Event Level (SEL)	The level of sound accumulated over a given time interval or event. Technically, the sound exposure level is the level of the time-integrated mean square A-weighted sound for a stated time interval or event, with a reference time of one second.

Regarding increases in A-weighted noise levels, a change in level of at least 5 dB is required before any noticeable change in community response would be expected. An increase of 5 dB is typically considered substantial.

A 10 dB change is subjectively heard as an approximate doubling in loudness and would almost certainly cause an adverse change in community response.

Major Noise Sources in San Luis Obispo County

Noise sources are commonly grouped into two major categories: transportation and non-transportation noise sources. This EIR focuses exclusively on the former. Transportation noise sources include surface traffic on public roadways, railroad line operations, and aircraft.

Motor Vehicle Traffic

Motor vehicles are the primary source of noise in most of the county. This can be attributed to the extensive network of major, primary, and secondary arterials located throughout the county, as well as the large number of vehicle trips that occur each day. Major roadway corridors in the county include US Highway 101 (US 101) and State Routes (SR) 1, 41, 46, 58, 166, and 227.

Traffic noise levels along these corridors are dependent on various factors, including vehicle volumes, the percentage of heavy trucks, and vehicle speeds. Based on noise data obtained from existing general plans within the county, traffic volumes and noise levels are typically highest along the portions of US 101. Noise levels along high-volume segments of US 101 can reach approximately 65 L_{dn}/CNEL at up to approximately 900 feet from the roadway centerline. Along these same roadway segments, the predicted 60 L_{dn}/CNEL noise contour would extend to approximately 1,900 feet from the roadway centerline. By comparison, predicted traffic noise levels along other roadway segments in the county would typically be lower, due primarily to decreased traffic volumes and vehicle speeds.

Railroads

Railroad activities in the county predominantly occur along the Union Pacific Railroad (UPRR) mainline. The UPRR mainline enters the county near Highway 1 north of Guadalupe and parallels Highway 1 northward to US 101 at Price Canyon Road. The route follows Price Canyon to SR 227 and then through San Luis Obispo and over the Cuesta Grade where the tracks parallel the Salinas River and US 101 to the Monterey county line and beyond.

The UPRR mainline is used for both freight transport and Amtrak passenger service. In general, the number of freight trains typically averages approximately two to three trains per day (SLOCOG 2019 RTP). However, the number of freight trains can vary from day to day, depending on demand. Amtrak passenger trains typically average approximately six trains per day (Amtrak 2019). There are currently no hourly restrictions pertaining to freight transport or Amtrak train operations along the UPRR corridor.

Train noise levels can vary depending on various factors, such as train speed, the number of engines used, track conditions (e.g., welded vs. jointed), and the condition of the train wheels. Additional sources, such as emanating from railyard operations (hooking up or decoupling rail cars), as well as the sounding of train horns and the operation of roadside signaling devices, can also contribute to overall noise levels. Representative railroad noise contours for the UPRR corridor (in dBA L_{dn}/CNEL) are summarized in **Figure 3.10-3**. As depicted, the predicted 60 dBA L_{dn}/CNEL noise contour can extend approximately 325 feet from the track centerline without the sounding of warning horns and up to approximately 525 feet from the track centerline with the sounding of warning horns. Actual noise levels will vary depending on various factors, such as site-specific conditions, the number and type of trains operated

on a daily basis, hours of operation, track conditions, and train operational characteristics (i.e., speed, number of engines and rail cars, etc.).

Figure 3.10-3: Representative Union Pacific Railroad Noise Levels

Noise Contour (dBA L_{dn}/CNEL)	Distance (Feet) from Center of Track	
	Beyond 1,000 Feet from Grade Crossing (without Horn Soundings)	Within 1,000 Feet of Grade Crossing (with Horn Soundings)
70	76	113
65	463	244
60	352	525

Notes: Predicted noise contours assume 10 freight and 4 passenger trains per day. Actual noise levels and contour distances will vary depending on various factors, such as site-specific conditions, the number and type of trains operated on a daily basis, hours of operation, track conditions, and train operational characteristics (i.e., speed, number of engines and rail cars, etc.).

Source: SLO County 1992

Airports

Noise levels due to aircraft operations have been identified as a major noise source in the county. There are three existing airports in the county: San Luis Obispo County Regional Airport, Paso Robles Municipal Airport, and Oceano Airport. Operational characteristics and noise levels associated with these airports are discussed in more detail below.

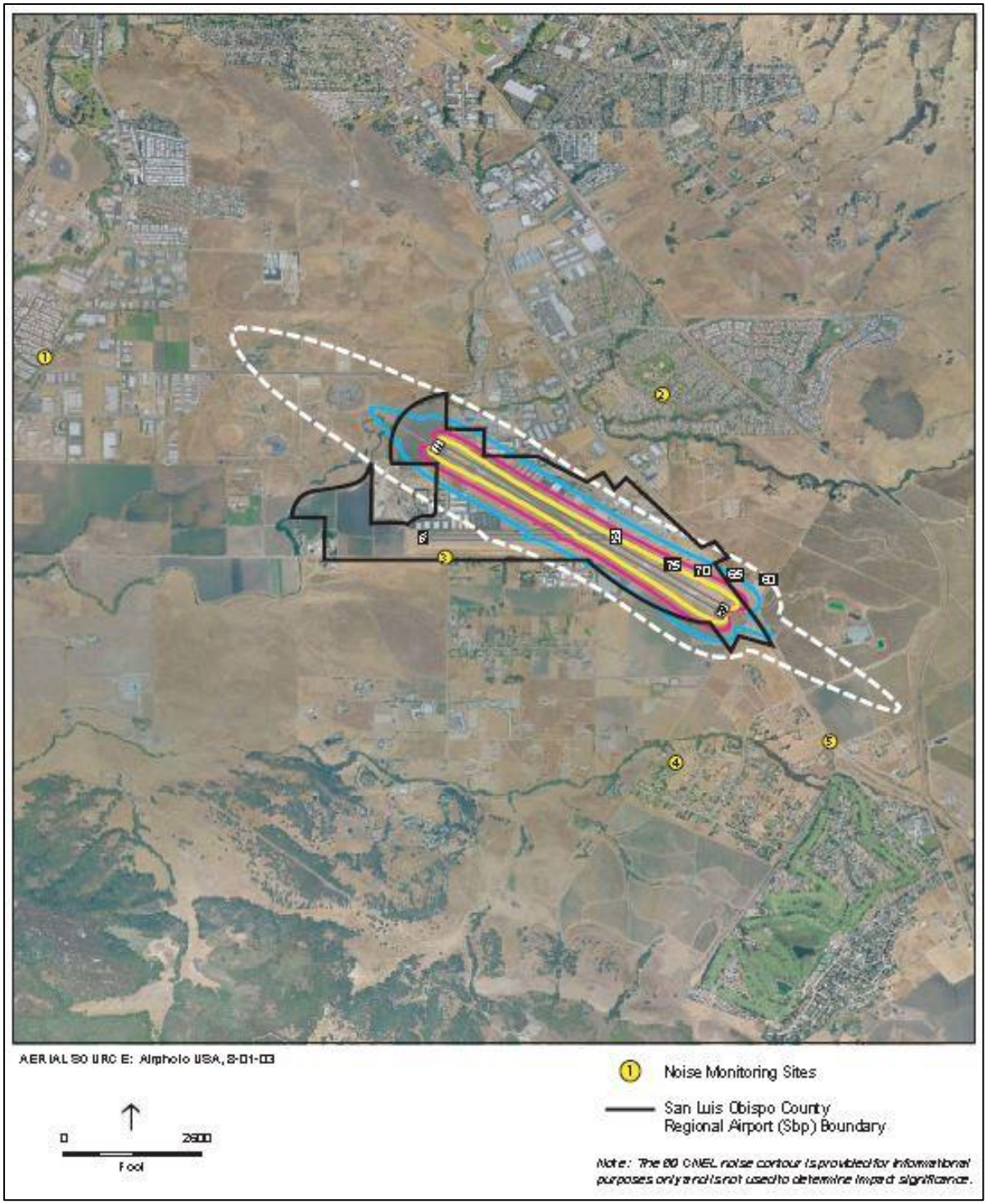
San Luis Obispo County Regional Airport. The San Luis Obispo County Regional Airport is located in the west-central portion of San Luis Obispo County, approximately 3.5 miles south of the City of San Luis Obispo. The airport consists of two intersecting runways. 2017 was a year for the record books at San Luis Obispo County Regional Airport (SBP). A record-breaking 407,646 passengers traveled to/from the airport in 2017 as compared to 330,231 passengers the year before, making a 23.4 percent increase.

Noise contours for San Luis Obispo County Regional Airport for existing (year 2018) and future (year 2023) conditions are depicted in **Figure 3.10-4** and **Figure 3.10-5**, respectively. Existing and future 60 dBA CNEL noise contours are projected to extend beyond the airport property lines and encroach upon nearby land uses (SLO County 2006).

Paso Robles Municipal Airport. Paso Robles Municipal Airport is located at an elevation of 839 feet in the north-central portion of San Luis Obispo County, approximately 4.5 miles northeast of the center of the City of Paso Robles and consists of two runways in an "open V" configuration. The airport is currently a general aviation facility (including executive and business aircraft) and serves as a regional center for governmental aviation (such as the California Highway Patrol and CAL FIRE). The number of based aircraft at the Paso Robles Municipal Airport has remained constant over the past 10 years with little deviation from the current 195 number. This would demonstrate that little change should be anticipated over the next few years, as general aviation continues to decline and the increases in business and commercial flights maintain their current numbers. The estimated 30,000 – 35,000 annual operations (take-offs and landing) continues to remain constant over this time period as well. The CNEL contours for Paso Robles Municipal Airport are depicted in **Figure 3.10-6** and **Figure 3.10-7**, respectively (City of Paso Robles 2003, 2007).

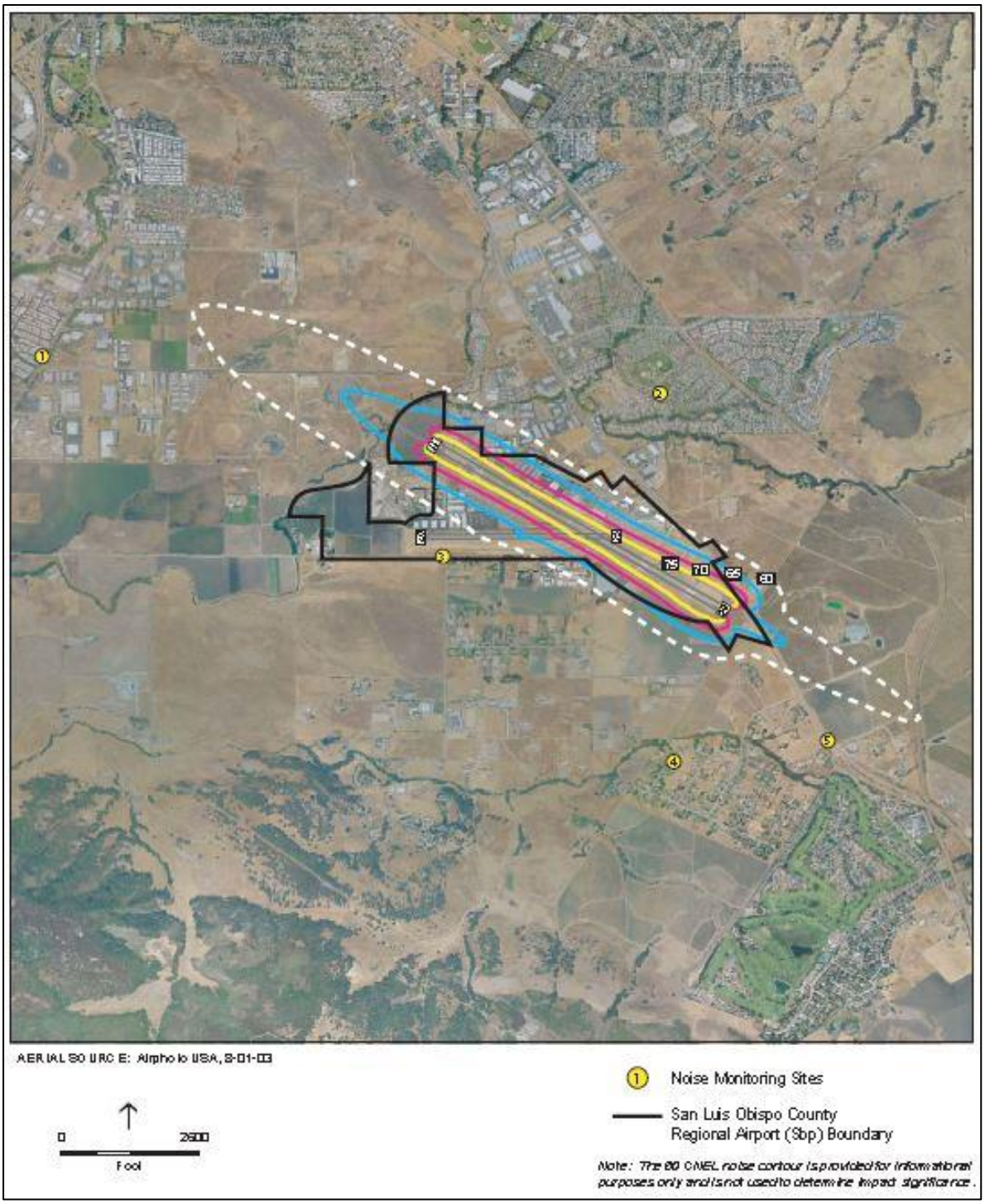
Oceano Airport. Oceano Airport is a general aviation airport located approximately 16 miles south of the City of San Luis Obispo, within the unincorporated Oceano urban area of the county. The airport is located at an elevation of 14 feet above mean sea level and consists of a single runway. Aircraft based at Oceano Airport are projected to increase from approximately 14 aircraft in 2010 to approximately 22 based aircraft in 2025 (SLO County 2008a). Existing and projected future noise contours for this airport are not currently available. However, based on expected annual operations, the projected 60 dBA CNEL noise contour would extend no more than 12,500 feet from start of takeoff. The 65 dBA CNEL airport noise contours for existing and future conditions are not anticipated to extent outside of the existing airport property line (SLO County 2008).

Figure 3.10-4: Existing Noise Contours San Luis Obispo County Regional Airport



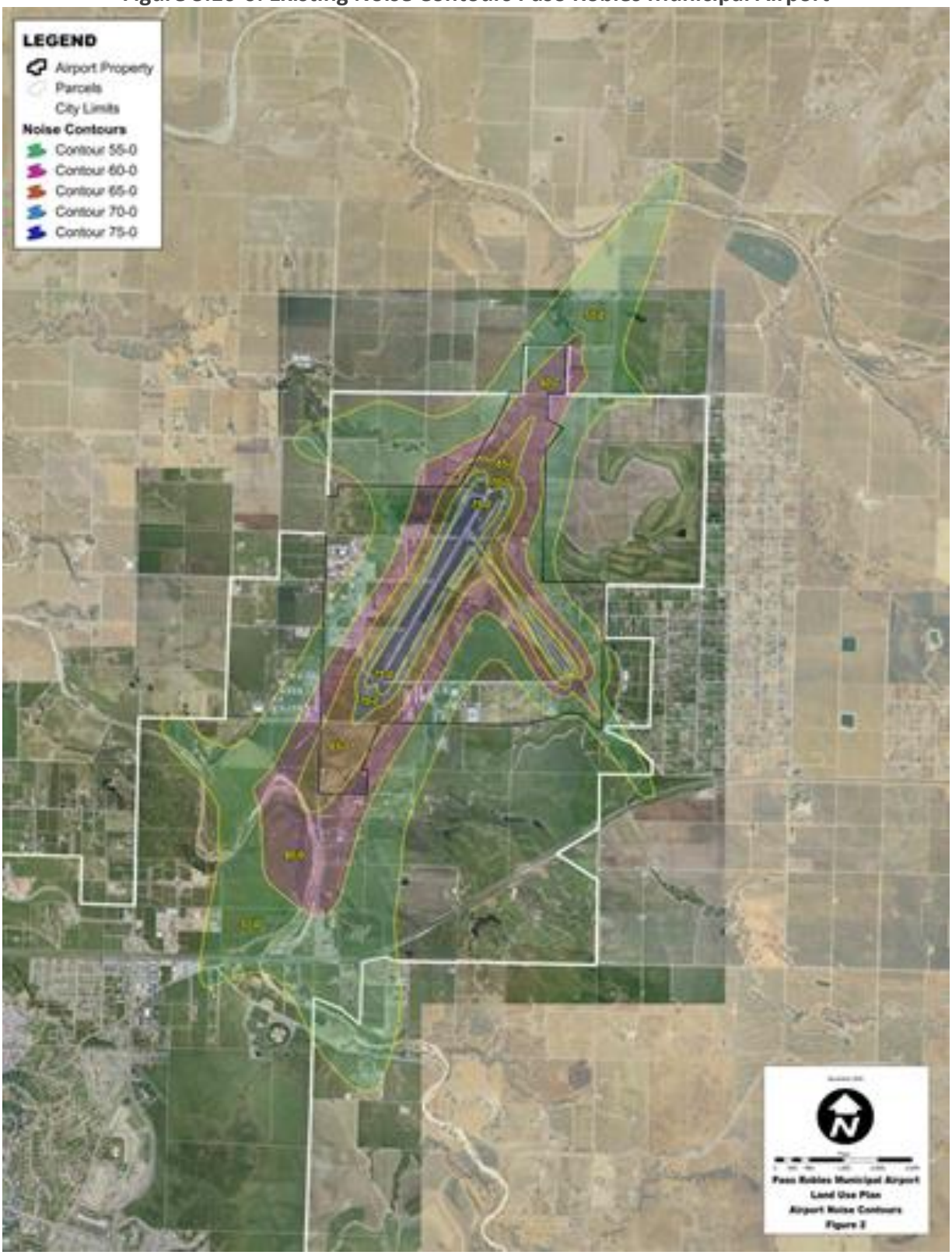
Source: County of San Luis Obispo 2006

Figure 3.10-5: Future (Year 2023) Noise Contours San Luis Obispo County Regional Airport



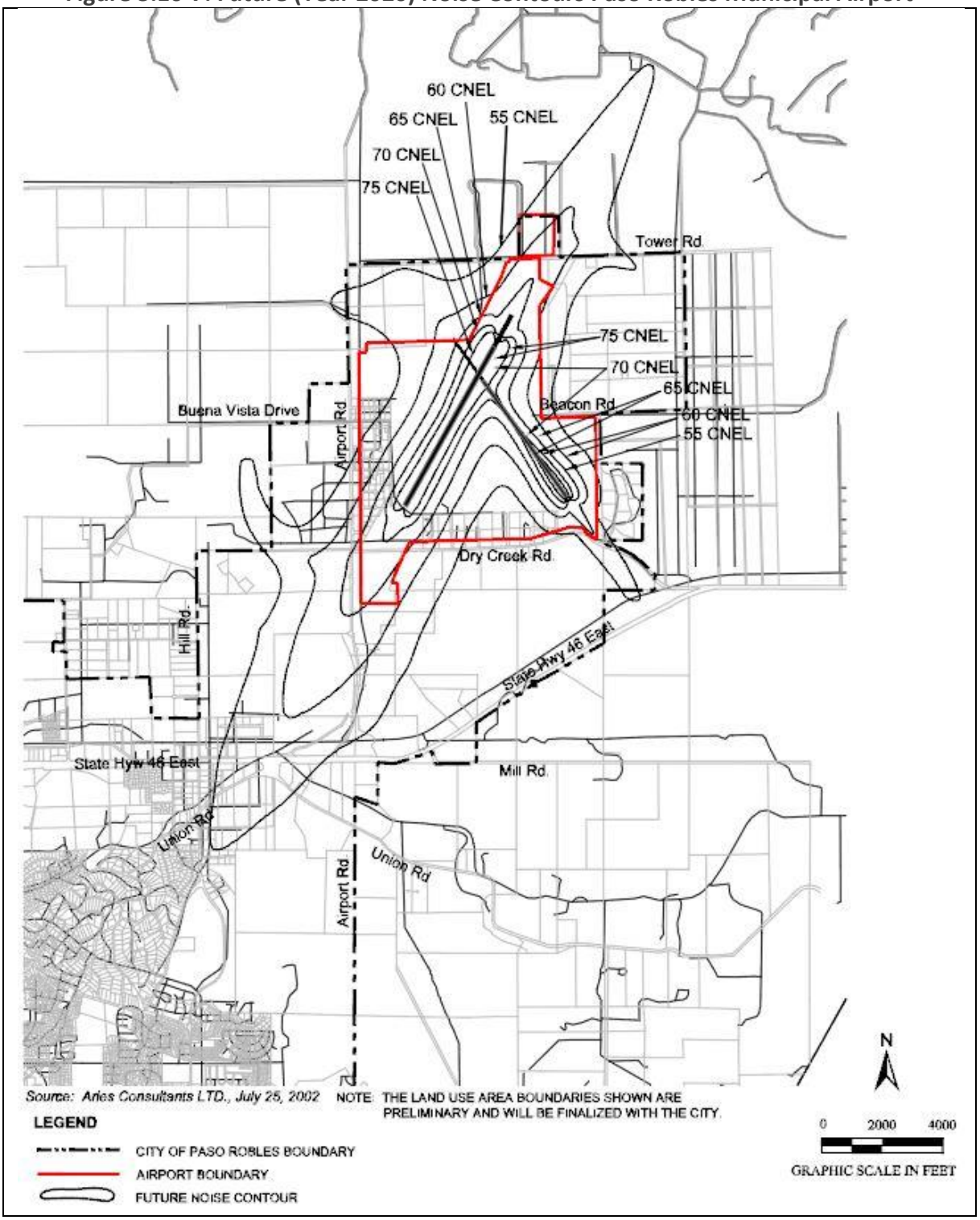
Source: County of San Luis Obispo 2006

Figure 3.10-6: Existing Noise Contours Paso Robles Municipal Airport



Source: City of Paso Robles 2007

Figure 3.10-7: Future (Year 2020) Noise Contours Paso Robles Municipal Airport



Source: City of Paso Robles 2003

These noise sources can be continuous or intermittent and may contain tonal components that are annoying to individuals who live nearby. For instance, emergency-use sirens and backup alarms are often considered nuisance noise sources but may not occur frequently enough to be considered incompatible with noise-sensitive land uses.

Commercial and industrial uses include, but are not limited to, trucking operations, aggregate mining, asphalt and concrete batch plants, and cold storage and packing facilities. Since these sources are not transportation-related, there is no need to discuss further.

Sensitive Receptors

Noise-sensitive land uses generally include those uses where exposure to noise would result in adverse effects, as well as uses where quiet is an essential element of their intended purpose. Sensitive Receptors is also a specific impact category included in the significance thresholds used in CEQA analysis of noise issues. Residential dwellings are of primary concern because of the potential for increased and prolonged exposure of individuals to both interior and exterior noise levels. Other noise-sensitive land uses include hospitals, convalescent facilities, parks, hotels, places of worship, libraries, and other uses where low interior noise levels are essential.

3.10.2 Regulatory Setting

In general, the federal government sets noise standards for transportation noise sources that are related to interstate commerce. These typically include aircraft, railroads, and motor carriers. State governments establish noise standards for those sources not regulated by federal standards such as automobiles, light trucks, motor boats, and motorcycles. Other noise sources associated with construction, as well as industrial and commercial activities, are usually regulated by noise ordinances and general plan policies, which are established by local jurisdictions' planning and community development agencies in consultation with county environmental health departments, the latter acting also as a local enforcement agency (LEA) with responsibility for implementing State environmental health regulations, in this case related to noise standards.

Federal

U.S. Environmental Protection Agency

The USEPA, Office of Noise Abatement and Control provides noise guidelines concerning the effects of noise and publishes various public reports on noise. EPA's guidelines indicate that interference with activity and annoyance will not occur if outdoor noise levels in residential areas are below a day-night average (L_{dn}) noise level of 55 dBA and indoor levels are below 45 dBA L_{dn}.

U.S. Department of Housing and Urban Development

The United States Department of Housing and Urban Development (HUD) guidelines for the acceptability of residential land use are set forth in the Code of Federal Regulations (CFR) Title 24, Part 51, Environmental Criteria and Standards. Noise above 75 dBA L_{dn} is normally considered unacceptable. HUD establishes an interior noise goal of 45 dBA L_{dn}. These guidelines apply only to new construction supported by HUD grants and are not binding upon local communities (Caltrans 2002a).

Federal Aviation Administration
Title 14 of the CFR, Part 150, Airport Noise Compatibility Planning, prescribes the procedures, standards, and methodology to be applied airport noise compatibility planning activities. Noise levels below 65 L_{dn} are normally considered to be acceptable for noise-sensitive land uses (Caltrans 2002a).

Federal Highway Administration
Federal Highway Administration (FHWA) regulations (23 CFR 772) specify procedures for evaluating noise impacts associated with federally funded highway projects and for determining whether these impacts are sufficient to justify funding noise abatement actions. The FHWA noise abatement criteria are based on worst hourly L_{eq} sound levels, not L_{dn} or CNEL values. The worst-hour 1-hour L_{eq} criteria for residential, educational, and health-care facilities are 67 dBA outdoors and 52 dBA indoors. The worst-hour 1-hour L_{eq} criterion for commercial and industrial areas is 72 dB (outdoors).

The FHWA document, Highway Traffic Noise Analysis and Abatement: Policy and Guidance (1995), calls for each state highway agency to prepare and adopt written guidelines specific to that state which must demonstrate compliance with 23 CFR 772. State highway agencies are allowed flexibility to establish their own definitions and quantifications of different criteria and decision items that are used in the guidelines to make noise abatement determinations.

Federal Transit Administration
The Federal Transit Administration (FTA) procedures for the evaluation of noise from transit projects are specified in the document titled Transit Noise and Vibration Impact Assessment Manual. The FTA noise impact criteria categorize noise-sensitive land uses as according to three categories (https/www.transit.dot.gov):

Category 1: Buildings or parks where quiet is an essential element of their purpose.

Category 2: Residences and buildings where people normally sleep.

Category 3: Institutional land uses with primarily daytime and evening use (e.g. schools, libraries, churches, and active parks).

State

State of California Public Utilities Code
Section 21669, Article 3, Chapter 4, Part 1, Division 9 of the California Public Utilities Code (PUC) (Aeronautics Law) provides the legislative authority to adopt noise standards governing the operation of aircraft and aircraft engines for airports. The California Department of Transportation (Caltrans), Division of Aeronautics, is the agency responsible for compliance with this PUC section. Section 21662.4(a), Article 3, Chapter 4, Part 1, Division 9 of the PUC exempts emergency service helicopters from local ordinances (Caltrans 2002a).

State Aeronautics Act
Chapter 4, Article 3, Section 21669 of the State Aeronautics Act (Division 9, Part 1 of the California Public Utilities Code) requires the California Department of Transportation to adopt, to an extent not

prohibited by federal law, noise standards applicable to all airports operating under a state permit (Caltrans 2002a).

California Airport Noise Regulations

The airport noise standards promulgated in accordance with the State Aeronautics Act are set forth in Section 5000 et seq. of the California Code of Regulations (Title 21, Division 2.5, Chapter 6). The current version of the regulations became effective in March 1990.

In Section 5006, the regulations state that: "The level of noise acceptable to a reasonable person residing in the vicinity of an airport is established as a community noise equivalent level (CNEL) value of 65 dBA for purposes of these regulations. This criterion level has been chosen for reasonable persons residing in urban residential areas where houses are of typical California construction and may have windows partially open. As specified in Section 5012, no such airport shall operate "with a noise impact area based on the standard of 65 dBA CNEL unless the operator has applied for or received a variance as prescribed in…" the regulations. For designated noise problem airports, the noise impact area is the area within the airport's 65 dB CNEL contour that is composed of incompatible land uses. Four types of land uses are defined as incompatible (Caltrans 2002a):

Residences of all types;
Public and private schools;
Hospitals and convalescent homes; and
Churches, synagogues, temples, and other places of worship.

Caltrans Division of Aeronautics

The California Department of Transportation (Caltrans), Division of Aeronautics, has adopted the Community Noise Equivalent Level (CNEL) as the noise descriptor to be used in describing the noise impact boundary of California airports. The Division of Aeronautics has identified a noise impact criterion of 65 dBA CNEL for noise-sensitive land uses, such as single-family dwellings. The CNEL descriptor is typically about 1 dB more than the L_{dn} because it applies an additional penalty for noise sources between the hours of 7:00 p.m. and 10:00 p.m. The L_{dn} descriptor only applies a penalty to noise levels between the hours of 10:00 p.m. and 7:00 a.m. (Caltrans 2002a).

State of California General Plan Guidelines

Section 65302(f) of the California Government Code (Title 7, Division 1, Chapter 3, Article 5), requires that a noise element be included as part of local general plans. Transportation noise sources are among the noise sources to be analyzed and addressed in general plans. To the extent practical, both current and future noise contours (expressed in terms of either CNEL) are to be included. The noise contours are to be "used as a guide for establishing a pattern of land uses…that minimizes the exposure of community residents to excessive noise" (OPR 2003).

Guidance on the preparation and content of general plan noise elements is provided by the Office of Planning and Research in its General Plan Guidelines (2019). Included in the document are recommended noise compatibility criteria for a variety of land use designations. These standards may be adjusted to reflect noise-source characteristics and to reflect the communities noise control goals and sensitivities to noise pollution (OPR 2003).

Local

San Luis Obispo County General Plan

The Noise Element, last updated in 1996, is a required element of the General Plans in California. Numerous policies are set forth in the San Luis Obispo County General Plan Noise Element that relate to noise. Listed below are the noise policies applicable to the Regional Transportation Plan.

> *Policy 3.3.3:* Noise created by new transportation sources, including roadway improvement projects, shall be mitigated so as not to exceed the levels specified in **Figure 3.10-1** within the outdoor activity areas and interior spaces of existing noise-sensitive land uses.

The San Luis Obispo County General Plan establishes 60 dBA L_{dn}/CNEL as the acceptable exterior noise level standard for most noise-sensitive land uses (e.g., residential, places of worship, hospitals, nursing homes) exposed to transportation noise sources. The County's acceptable interior noise standard for noise-sensitive land uses ranges from 35 to 45 dBA L_{dn}/CNEL.

Groundborne Vibration

There are no federal, state, or local regulatory standards for groundborne vibration. However, various criteria have been established to assist in the evaluation of vibration impacts. Both the Federal Transit Administration and Caltrans have developed vibration criteria based on potential structural damage risks and human annoyance. These criteria differentiate between transient and continuous/frequent vibration sources. Transient sources of groundborne vibration include intermittent events, such as blasting, whereas, continuous and frequent events would include the operations of equipment, including construction equipment, and vehicle traffic on roadways (Caltrans 2002b, 2004, 2013a).

3.10.3 Impacts and Mitigation Measures

Standards of Significance

For the purposes of this analysis, implementation of the RTP would result in a significant impact if it would result in:

- Exposure of persons to (or generation of) noise levels in excess of standards established in the local general plan or noise ordinance or applicable standards of other agencies.
- Exposure of persons to (or generation of) excessive groundborne noise levels.
- Exposure of persons to (or generation of) excessive groundborne vibration.
- A substantial permanent increase in ambient noise levels in the project vicinity above levels existing without the project.
- A substantial temporary or periodic increase in ambient noise levels in the project vicinity above levels existing without the project.

- For development located in an area covered by an airport land use plan (or, where such a plan has not been adopted, within 2 miles of a public airport or public use airport), exposure of people residing or working in the project area to excessive noise levels.

- For development within the vicinity of a private airstrip, result in exposure of people residing or working in the project area to excessive noise levels.

Methodology

The analysis herein is focused on the potential noise sources impacts associated with implementation of the RTP.

The analysis of noise impacts considers the effects of both temporary construction-related noise and long-term operational noise associated with planned transportation system improvements. Temporary construction noise was estimated based on levels presented in the FHWA Roadway Construction Noise Model (2006). Long-term traffic-related noise was qualitatively assessed based on evaluation of changes in traffic volumes, vehicle distribution, and roadway characteristics resulting from implementation of the RTP.

Long-term noise level increases are considered a result of the RTP only if project implementation involves an improvements that introduces a new noise source or moves an existing noise source closer to a sensitive receptor (extension of a road through a residential area, for example). Increases in traffic on existing roads on which no improvements are planned are not considered impacts of the 2019 RTP, but rather are a result of general increases in traffic. Groundborne vibration impacts were qualitatively assessed based on a comparison of typical vibration levels associated with construction activities and transportation sources and Caltrans-recommended groundborne vibration criteria for determination of potential structural damage and human annoyance.

The analysis recognizes the programmatic nature of the RTP and, therefore, focuses on the potential implications of the proposed policies of the RTP and not on the individual project-level effects of specific projects. The reader is directed to **Section 5.0, Cumulative Impacts,** of this EIR for analysis of cumulative impacts.

Project Impacts and Mitigation Measures

This section describes generalized noise impacts associated with implementation of the projects listed in the RTP.

Short-Term Construction Noise Level Increases

Impact N-1: Construction activity associated with road, bike, pedestrian, transit, rail, and airport projects would create temporary noise level increases in discrete locations throughout the county over the life of the RTP. This is considered a **Class II, significant but mitigable**, impact.

The operation of heavy equipment during the construction of roadway infrastructure would result in temporary increases in noise in the immediate vicinity of individual construction sites. During construction of the project, noise from construction activities may intermittently dominate the noise environment in the immediate area of construction. **Figure 3.10-8** summarizes noise levels produced by construction equipment that is commonly used on roadway construction projects.

Figure 3.10-8: Typical Construction Equipment Noise Levels

Equipment	Typical Noise Level (dBA) at 50 Feet from Source		Distance to Noise Contours (feet, dBA L_{eq})		
	L_{max}	L_{eq}	70 dBA	65 dBA	60 dBA
Air Compressor	80	76	105	187	334
Auger/Rock Drill	85	78	133	236	420
Backhoe/Front End Loader	80	76	105	187	334
Blasting	94	74	83	149	265
Boring Hydraulic Jack/Power Unit	80	77	118	210	374
Compactor (Ground)	80	73	74	133	236
Concrete Mixer Truck	85	81	187	334	594
Concrete Mixer (Vibratory)	80	73	74	133	236
Concrete Pump Truck	82	75	94	167	297
Concrete Saw	90	83	236	420	748
Crane	85	77	118	210	374
Dozer/Grader/Excavator/Scraper	85	81	187	334	594
Drill Rig Truck	84	77	118	210	374
Generator	82	79	149	265	472
Gradall	85	81	187	334	594
Hydraulic Break Ram	90	80	167	297	529
Jack Hammer	85	78	133	236	420
Impact Hammer/Hoe Ram (Mounted)	90	83	236	420	748
Pavement Scarifier/Roller	85	78	133	236	420
Paver	85	82	210	374	667
Pile Driver (Impact/Vibratory)	95	88	420	748	1,330
Pneumatic Tools	85	82	210	374	667
Pumps	77	74	83	149	265
Truck (Dump/Flat Bed)	84	80	167	297	529

Sources: FHWA 2006

Noise levels from point sources such as construction sites typically attenuate at a rate of about 6 dBA per doubling of distance. Based on this attenuation rate and assuming a maximum noise level of

approximately 88 dBA L_{eq} at 50 feet, average construction noise levels would be reduced to approximately 65 dBA L_{eq} at approximately 700 feet from the construction site. Predicted noise levels would vary depending on multiple factors, such as the number and type of equipment used, equipment usage rates, area of activity, and shielding provided by intervening terrain and structures. Delivery vehicles, construction employee vehicle trips, and haul truck trips may also contribute to overall construction noise levels.

Although construction-generated noise levels would be short term, significant increases in ambient noise levels at nearby noise-sensitive land uses could potentially occur. For noise-sensitive land uses, such as residential dwellings, activities occurring during the more noise-sensitive evening and nighttime hours are of particular concern. Construction activities occurring during these more noise-sensitive hours may result in increased levels of annoyance and potential sleep disruption to occupants of nearby residential dwellings. For these reasons, short-term construction-generated noise levels would be considered **potentially significant**.

2019 RTP Goals, Policies, and/or Strategies that Serve to Reduce Potential Impacts
Compliance with the following 2019 RTP Action Strategy would reduce project impacts related to short-term construction noise levels:

> *Protect and enhance sensitive resources and mitigate adverse impacts to the environment associated with providing street, road, and highway improvements.*

In addition, at the time of specific project-level environmental review, the lead agency shall ensure compliance with the following mitigation measures through placement of conditions of approval on applicable projects to reduce impacts to a less than significant level.

Mitigation Measures

MM N-1(a): The lead agency of a particular RTP project shall ensure that, where residences or other noise-sensitive uses are located near construction sites, appropriate measures shall be implemented to ensure consistency with noise ordinance requirements relating to construction. Specific techniques may include, but are not limited to, restrictions on construction timing, use of sound blankets on construction equipment, and the use of temporary walls and noise barriers to block and deflect noise.

MM N-1(b): If a particular project located adjacent to noise-sensitive receptors requires pile driving, the lead agency shall require the use of techniques to the maximum extent feasible in order to reduce the associated noise and vibratory impacts. This shall be accomplished through the placement of conditions on the project during its individual environmental review. In extreme cases, due to proximity, duration, or intensity, the impact of pile driving may not be mitigable, short of providing compensation for temporary relocation of residents, or alternative compensatory arrangements. The subsequent CEQA and/or NEPA review should consider requiring specific conditions of approval to mitigate significant impacts associated with pile driving.

Noise impacts associated with proposed construction-related projects would be analyzed in more detail in subsequent project-specific CEQA and NEPA (if applicable) environmental impact assessments.

Mitigation measures would be recommended to reduce significant construction-generated ground-borne vibration impacts. The level of mitigation would be project- and site-specific and would include measures normally required by Caltrans and/or applicable requirements identified in the general plan noise elements and noise ordinances of the applicable jurisdictions. With implementation of readily available and commonly used noise reduction measures and compliance with applicable noise standards, this impact would be considered **less than significant**.

Long-Term Operational Noise Level Increases

Impact N-2: Various RTP projects could potentially expose sensitive receptors to noise in excess of normally acceptable levels. Projects that increase use of existing roadways, rail lines, and other transportation facilities, or realign such facilities, could result in substantial increases in noise levels at adjacent receptors. This would be considered a **Class I, significant and unavoidable**, impact.

Roadways

The RTP includes some roadway modification projects, however, with some exceptions these would not involve road widening. Those that do, shoulder widening and Route 1 widening to reduce congestion and incorporate a bicycle turn lane, are relatively limited in scope. Such projects would not, in themselves, introduce new traffic, but rather are intended to relieve traffic congestion or poor safety conditions. Although many of the planned widening projects are in rural areas where sensitive noise receptors would not be affected, several would move traffic closer to noise-sensitive land uses.

Traffic noise levels are influenced by many factors, but are predominantly a function of traffic volumes, vehicle type(s), and speed. Assuming that overall vehicle speeds and the types or percentages of vehicle types utilizing a roadway remain roughly similar to existing conditions, a doubling of vehicle traffic would be required before a noticeable increase (i.e. 3 dBA) in traffic noise levels would occur. As a result, this impact would be considered **less than significant**.

Airports

No projects identified in the RTP involve airport improvements, and none of the projects would result in the development or relocation of sensitive land uses that would result in increased exposure to aircraft noise levels. In addition, the RTP does not propose any changes in air traffic patterns. For these reasons, **no significant** impacts due to aircraft operations and related noise levels would occur.

Rail Operations

The RTP rail projects would include expansion of some existing stations to facilitate expanded service, which would include increased train and bus services. These improvements, as well as other rail projects (e.g. track and siding improvements, constructing a rail layover facility, track realignments) could result in substantial periodic increases in ambient noise levels at nearby noise-sensitive receptors. Implementation of these rail projects would result in minimal increases in ambient noise levels when averaged over a 24-hour period, but could produce substantial periodic noise levels. In addition, railroad track realignments could result in a closer proximity between rail noise sources and adjacent receptors. This would be considered a **potentially significant** impact.

Transit Operations

Projects that would increase the number of buses or other transit vehicles used by transit providers or that would alter or expand existing transit routes would result in increased bus trips and/or trip lengths. This would increase noise on county roadways. However, the reduction in traffic noise that would occur as a result of the associated reduction in vehicle trips would more than offset the noise increase. Therefore, transit projects would result in an overall noise reduction when compared to existing conditions, which would be considered a **beneficial** impact.

Park-and-Ride Lots

Two different strategies related to the implementation of park-and-ride facilities include centralization and decentralization. The San Luis Obispo region has selected the concept of decentralization, which provides multiple small-scale park-and-ride lots to maximize commuter choices. The size of park-and-ride lots varies, depending on the design volume, the available land areas, and the size and number of other available public parking lots in the area. Some larger park-and-ride lots may also be developed in future years to serve transit centers.

Noise levels associated with park-and-ride facilities are typically the result of vehicle exhaust, brake and tire squeal, the opening and closing of doors and trunks, and occasional car alarms, as well localized increases in vehicle traffic on nearby roadways. Depending on the design size, location, and site conditions, proposed park-and-ride facilities could result in localized increases in ambient noise levels that could adversely affect nearby noise-sensitive receptors. As a result, this would be considered a **potentially significant** impact.

2019 RTP Goals, Policies, and/or Strategies that Serve to Reduce Potential Impacts This EIR incorporates the 2019 RTP's goals, policy objectives, and action strategies as listed in 2019 RTP Chapter 3 which is included in **Volume II, Technical Appendices**. Included action strategies serve to reduce noise project impacts related to long-term operational noise levels.

In addition, at the time of specific project-level environmental review, the lead agency shall ensure compliance with the following mitigation measures, through placement of conditions of approval on applicable projects, to reduce long-term operational noise impacts.

Mitigation Measures

MM N-2: The lead agency of a particular RTP project shall ensure that proposed transportation projects are analyzed, in accordance with applicable CEQA and/or NEPA requirements (if applicable), for potential noise and groundborne vibration impacts to nearby noise-sensitive land uses. Noise and groundborne vibration studies shall be conducted in accordance with applicable federal, state, and local requirements. Where significant impacts are identified, mitigation measures shall be implemented to reduce identified adverse impacts. Noise reduction measures may include, but are not necessarily limited to, the following:

- Construction of acoustic barriers to shield nearby noise-sensitive land uses. For aesthetic concerns, the use of sound barriers, or any other architectural feature that could block views from a scenic highway or other sensitive view corridors, shall be discouraged. Long expanses of walls or fences should be interrupted with offsets and provided with accents to prevent monotony. Whenever

possible, a combination of construction elements should be used, including solid fences, walls, and landscaped berms.

- Site/project redesign and use of buffers to ensure that future development is compatible with transportation facilities.
- Changes to transportation facility design. Examples include changes in proposed roadway alignment or construction of roadways so that they are below grade relative to nearby sensitive land uses to create an effective barrier between the roadway and sensitive receptors.
- Use of low-noise pavements (e.g., rubberized asphalt).

Noise impacts associated with proposed improvements would be analyzed in more detail in subsequent project-specific CEQA and NEPA (if applicable) environmental impact assessments. Mitigation measures would be recommended to reduce significant noise impacts. The level of mitigation would be project- and site-specific and would include noise mitigation normally recommended by FHWA and Caltrans, as well as requirements under the general plan noise elements and noise ordinances of the applicable jurisdictions. For most projects, implementation of appropriate mitigation measures would be anticipated to reduce noise impacts to less than significant levels. However, it may not be feasible to mitigate this impact to a less than significant level in all instances. For example, implementation of soundwalls or other noise barriers along rail lines may be physically or economically infeasible in certain locations. This impact is therefore considered to be potentially **significant and unavoidable**.

Exposure of Sensitive Receptors to Groundborne Vibration

Impact N-3: Construction activity associated with RTP projects would create temporary increases in groundborne vibration levels in discrete locations throughout the county over the life of the RTP. This is considered a **Class II, significant but mitigable**, impact.

Long-term (i.e., operational) and short-term (i.e., construction) exposure to groundborne vibration levels resulting from implementation of 2019 RTP projects are discussed in more detail below.

Long-Term Operation

Groundborne vibration and noise levels associated with transportation sources, such as roadway and rail traffic, is typically considered to pose no threat to buildings, and potential annoyance to people would be minimal. Traffic vibration levels associated with on-road vehicles are typically highest associated with truck passbys. Automobile traffic normally generates vibration peaks of one-fifth to one-tenth that of trucks. Based on measurements conducted by Caltrans, even the highest truck-generated vibrations, which were measured at approximately 16 feet from the centerline of the near travel lane, were not found to exceed 0.08 in/sec. This level coincides with the maximum recommended "safe level" for ruins and historical structures (Caltrans 2002b, 2004, 2013). For these reasons, long-term exposure to groundborne vibration resulting from implementation of RTP projects related to roadway and transit facility improvements would not be anticipated to exceed applicable groundborne vibration criteria.

However, unlike on-road vehicles, trains can result in increased groundborne vibration levels that would adversely affect nearby land uses. Any RTP projects that would relocate railroad track closer to

existing land uses could result in significant increases in groundborne vibration levels. As a result, long-term exposure to groundborne vibration levels associated with future rail improvements would be considered **potentially significant.**

Short-Term Construction

Construction activities would require the use of various tractors, trucks, and jackhammers, which could adversely affect nearby land uses. Groundborne vibration levels commonly associated with construction equipment are summarized in **Figure 3.10-9**. As indicated, the highest groundborne vibration levels would be generated by the use of pile drivers and vibratory rollers. Groundborne vibration levels associated with proposed construction improvement projects could potentially exceed recommended criteria for structural damage and/or human annoyance (0.2 and 0.1 in/sec ppv, respectively) at nearby land uses. As a result, short-term groundborne vibration impacts would be considered **potentially significant**.

2019 RTP Goals, Policies, and/or Strategies that Serve to Reduce Potential Impacts

This EIR incorporates the 2019 RTP's goals, policy objectives, and action strategies as listed in 2019 RTP Chapter 3 which is included in **Volume II, Technical Appendices**. Included action strategies serve to reduce project impacts related to groundborne vibration

Figure 3.10-9: Representative Vibration Source Levels for Construction Equipment

1) Equipment		2) Peak Particle Velocity at 25 Feet (In/Sec)
Pile Driver (Impact)	Upper Range	1.518
	Typical	0.644
Pile Driver (Sonic)	Upper Range	0.734
	Typical	0.170
Vibratory Roller		0.210
Hoe Ram		0.089
Large Bulldozers		0.089
Loaded Trucks		0.076
Jackhammer		0.035
Small Bulldozers		0.003

Source: FTA 2006, Caltrans 2004

At the time of specific project-level environmental review, the lead agency shall ensure compliance with the following mitigation measures, through placement of conditions of approval on applicable projects, to reduce impacts to a less than significant level.

Mitigation Measures

MM N-3: Implement mitigation measures **MM N-1(a)**, **MM N-1(b),** and **MM N-2**.

Groundborne vibration impacts associated with proposed RTP projects would be analyzed in more detail in subsequent project-specific CEQA and NEPA (if applicable) environmental impact assessments. Mitigation

measures would be recommended to reduce significant groundborne vibration impacts. The level of mitigation would be project- and site-specific and would include measures normally required by Caltrans and/or applicable requirements of local jurisdictions. Wtih mitigation, this impact would be considered **less than significant**.

3.11 PUBLIC SERVICES AND UTILITIES

This section describes the existing public facilities and services in San Luis Obispo County. The public services setting is primarily based on the County's 2010 Conservation and Open Space Element (COSE), (SLO County 2010a), SLOCOG 2010 RTP EIR (SLOCOG 2010), the Energy Section of the General Plan (SLO County 1995), and previous EIRs prepared for projects in San Luis Obispo County.

3.11.1 Existing Setting

Provision of Public Services and Utilities in the County

Public services and utilities, such as water, wastewater (sewer), and solid waste, in the county are provided by various local jurisdictions and agencies including cities, the County (often through county service areas (CSA), private purveyors or utilities, and special districts, such as community service districts (CSD) and sanitary districts. A CSA is a special taxing area that bears a special assessment or service charge for particular types of extended services. The County manages 12 CSAs, most of which provide multiple services. Services may include one or more of the following:

- Extended police protection
- Structural fire protection
- Local park, recreation, or parkway facilities and services
- Extended library facilities and services
- Television translator station facilities and services

CSAs are managed by the Board of Supervisors, under which county service areas may levy taxes, establish zones of benefit, incur bonded indebtedness, and enter into contracts. Services may be expanded with Local Agency Formation Commission (LAFCO) approval at any time following formation, allowing county service areas to provide virtually every service. County service areas may annex contiguous or noncontiguous territory. A CSD is a local governing body authorized to provide a variety of public services and typically has an elected governing body with full financial and operational responsibilities. CSDs throughout the county include Avila Beach CSD, California Valley CSD, Cambria CSD, Cayucos CSD, Heritage Ranch CSD, Los Osos CSD, Nipomo CSD, Oceano CSD, San Miguel CSD, San Simeon CSD, and Templeton CSD.

Public Services

Fire Protection

The California Department of Forestry and Fire Protection (Cal Fire) provides fire protection for the County of San Luis Obispo, the City of Pismo Beach, the Avila Beach CSD, and the Los Osos CSD by cooperative agreements. Cal Fire provides services related to fire control and suppression, rescue, advanced life support/emergency medical assistance, and the mitigation of hazardous materials incidents. In the event of major disasters, the agency is trained and equipped to handle a countywide incidents including earthquakes, tsunami, riots, fires, and other major emergencies.

Cal Fire stations are located in Cambria, Cayucos, San Luis Obispo (2), Atascadero, Los Osos, Nipomo, San Luis Obispo Airport, Arroyo Grande, Paso Robles (4), Shandon, Bradley, Santa Margarita (2), California Valley, Creston, and Pismo Beach (2).

Police Services

The San Luis Obispo County Sheriff's Department is the law enforcement agency responsible for protecting life and property as well as for providing service, security, and safety to the unincorporated areas of the county. The department's current staff includes 159 sworn personnel, 121 correctional staff, and 121 civilian personnel in addition to approximately 400 volunteers.

Emergency Medical Response

The San Luis Obispo County Office of Emergency Services works with state agencies, county departments, and various community groups to coordinate and handle major disasters affecting county residents. The county is at risk of floods, fires, earthquakes, and hazardous materials incidents such as an accident at the Diablo Nuclear Power Plant. The Office of Emergency Services promotes effective communication between agencies and encourages public preparedness involved in emergency response.

Utilities and Service Systems

Wastewater

Most of the county's larger unincorporated communities have formed community service districts or sanitary districts to operate and maintain their sewage collection and treatment systems. There are nine major wastewater treatment facilities, located throughout San Luis Obispo County. Those areas that are not connected to the treatment facilities rely on septic tanks and leach fields or other acceptable methods to dispose of wastewater.

The North Coast planning area, specifically the unincorporated County community of Los Osos-Baywood, had been designated Level of Severity III for sewage. This area has historically relied upon on-site septic systems, a condition which over time has resulted in degradation of the areas groundwater, primarily from nitrate levels in excess of State standards. This is significant because this groundwater basin has been a source of drinking water. These discharges have affected water quality in Morro Bay. In 2016, the County completed a wastewater treatment facility (Los Osos Waste Water Project) to serve this area, along with an extensive collection system. The project includes 50 miles of pipeline, 21 pump stations, and a recycling plant. The recycled water component, provides irrigation-quality water to residents, was also included to comply with Central Coast Water Board (CCWB) requirements.

Several other wastewater facilities are also being planned or upgraded, including a new wastewater recycling facility in Cayucos and expansion of the City of San Luis Obispo's Water Resources Recovery Facility (WRRF) in order to address water quality issues related to meeting nutrient and disinfection by-product standards, but also to accommodate wet weather and future flow requirements, as well as expand wastewater recycling capabilities. The City of Morro Bay is replacing their aging plant, built in 1953.

In addition, the Rolling Hills community in South County has recommended Level of Severity II for sewage, not accounting for areas that currently rely on septic tanks for sewage disposal. The planning

areas of Adelaida, El Pomar/Estrella, Las Pilitas, and Shandon-Carrizo do not have community wastewater systems and rely solely on septic tanks and other individual sewage disposal systems.

Water
See **Section 3.14, Water Resources,** for a discussion of water supply and purveyance.

Solid Waste
Solid waste is accepted at the three landfills in the county—Cold Canyon Landfill in San Luis Obispo, Chicago Grade Landfill northeast of Atascadero, and the City of Paso Robles Landfill east of the City of Paso Robles—and in South County at the Nipomo Transfer Station. Curbside recycling is offered in almost all communities throughout the county and greatly reduces the impact on the area's landfills. Several facilities also provide recycling or the ability for reuse of construction material.

3.11.2 Regulatory Framework

Federal

Resource Conservation and Recovery Act
The Resource Conservation and Recovery Act (RCRA) was enacted in 1976 to address the huge volumes of municipal and industrial solid waste generated nationwide. After several amendments, the act as it stands today governs the management of solid and hazardous waste and underground storage tanks (USTs). The RCRA is an amendment to the Solid Waste Disposal Act of 1965. RCRA has been amended several times, with the most substantial changes made by the Hazardous and Solid Waste Amendments (HSWA) of 1984. The RCRA is a combination of the first solid waste statutes and all subsequent amendments. It authorizes the U.S. Environmental Protection Agency (USEPA) to regulate waste management activities. The act authorizes states to develop and enforce their own waste management programs, in lieu of the federal program, if a state's waste management program is equivalent to, consistent with, and no less stringent than the federal program.

State

California Integrated Waste Management Act
To minimize the amount of solid waste that must be disposed of by transformation and land disposal, the State Legislature passed the California Integrated Waste Management Act of 1989 (AB 939), effective January 1990. According to AB 939, all cities and counties are required to divert 25 percent of all solid waste from landfill facilities by January 1, 1995, and 50 percent by January 1, 2000.

The act further requires every city and county to prepare two documents to demonstrate how the mandated rates of diversion will be achieved. The first document is the Source Reduction and Recycling Element (SRRE) describing the chief source of the jurisdiction's waste, the existing diversion programs, and the current rates of waste diversion and new or expanded diversion programs intended to implement the act's mandate. The second document is the Household Hazardous Waste (HHW) Element, which describes what each jurisdiction must do to ensure that household hazardous wastes are not mixed with regular nonhazardous solid waste and deposited at a landfill.

School Facilities Act of 1998

The School Facilities Act of 1998, also known as SB 50, provides state funding for new school construction projects that can satisfy criteria for such funding, including eligibility due to growth, Division of State Architect plan approval, and California Department of Education site approval. However, the act also dramatically limits the maximum amount of impact fees that can be charged by school districts as mitigation for new residential, commercial, and industrial construction. The act also prohibits local agencies from denying a development application based on a person's refusal to provide school facilities mitigation that exceeds the fee amount and refusing to approve any legislative or adjudicative act on the basis that school facilities are inadequate.

California Occupational Safety and Health Administration

In accordance with California Code of Regulations Title 8 Sections 1270 "Fire Prevention" and 6773 "Fire Protection and Fire Equipment," the California Occupational Safety and Health Administration (Cal/OSHA) has established minimum standards for fire suppression and emergency medical services. The standards include, but are not limited to, guidelines on the handling of highly combustible materials, fire hose sizing requirements, restrictions on the use of compressed air, access roads, and the testing, maintenance, and use of all firefighting and emergency medical equipment.

Emergency Response/Evacuation Plans

The State of California passed legislation authorizing the Office of Emergency Services (OES) to prepare a Standard Emergency Management System (SEMS) program, which sets forth measures by which a jurisdiction should handle emergency disasters. Noncompliance with SEMS could result in the State withholding disaster relief from the noncomplying jurisdiction in the event of an emergency disaster. The preservation of life, property, and the environment is an inherent responsibility of local, state, and federal government.

California Department of Forestry and Fire Protection

The California Department of Forestry and Fire Protection (Cal Fire) emphasizes the management and protection of California's natural resources. Cal Fire oversees enforcement of forest practice regulations and manages the areas of the county that provide for commercial timber production, public recreation, and research and demonstration of good forest management practices.

California Building Energy Efficiency Standards

Title 24, Part 6 of the California Code of Regulations, known as the Building Energy Efficiency Standards, was established in 1978 in response to a legislative mandate to reduce California's energy consumption. The standards are updated periodically to allow consideration and possible incorporation of new energy efficiency technologies and methods. The most recent update was adopted in 2016.

Local

City and County General Plans

Public services such as fire protection, police protection, schools, parks, and/or other public facilities are addresses in various elements of the local General Plans (Parks and Recreation, Safety, etc.).

San Luis Obispo Integrated Waste Management Authority (IWMA)

The IWMA is a joint powers agency governed by a 13 member board consisting of the county supervisors, representatives of each of the seven cities in the county and one representative of all the

districts in the county with waste collection responsibilities. The IWMA was created by San Luis Obispo County and cities in the county in 1994 to facilitate the attainment of solid waste reduction mandated by the California Integrated Waste Management Act of 1989 (AB 939).

Structure of Solid Waste Management in San Luis Obispo County
San Luis Obispo County is served by three landfill operations:

- Cold Canyon Landfill (Cold Canyon), has a permitted daily capacity (pdc) of 1200 tons,
- Chicago Grade Landfill & Recycling (Chicago Grade) has a pdc of 500 tons ,and
- Paso Robles Landfill has a pdc of 250 tons.

The Nipomo Transfer Station, with a pdc of 500 tons, serves as a temporary depository for material destined for Chicago Grade.

There are eight hauling companies that have exclusive franchises with one or more of the many agencies (county, cities, and districts) in the county. In addition there are individual drop-offs, for a fee, at the three landfills and the transfer station in Nipomo. Roll-offs are also used for waste removal.

San Luis Obispo County Division of Public Works
The County Department of Public Works (DPW) functions as staff to the County and oversees the administration and operation of water and wastewater wholesale facilities, flood control, and long-term master water planning for San Luis Obispo County. This includes the issuance of will-serves for water and sewer service for residents in county service areas (CSAs), which are specific unincorporated urban/rural residential areas in the county. Primary DPW water resources projects and programs include the Los Osos Wastewater Project, the Lopez Water Project, the Nacimiento Water Pipeline Project, the County's Stormwater Management Program, water quality monitoring, water resources data collection, and long-term water supply planning.

3.11.3 Impacts and Mitigation

Measures

STANDARDS OF SIGNIFICANCE

The following standards are based on State CEQA Guidelines Appendix G. A significant impact to public services and utilities would occur if implementation of the proposed project would:

a) Result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times, or other performance objectives for any of the public services or other public facilities.

b) Be served by a landfill with sufficient permitted capacity to accommodate the project's solid waste disposal needs.

c) Comply with federal, state, and local statutes and regulations related to solid waste.

Methodology

The analysis herein is focused on the potential public services and utilities impacts associated with implementation of the RTP. It is based on a review of existing data including existing literature, County policies, programs, regulations and other various components, and publicly available documents, including previous EIRs prepared for projects within the county. The analysis recognizes the programmatic nature of the RTP; therefore, it focuses on the potential implications of the proposed policies of the RTP and not on the individual project-level effects of specific projects. The reader is directed to **Section 5.0, Cumulative Impacts,** of this EIR for analysis of cumulative impacts.

Impacts and Mitigation Measures

This section describes generalized public services and utilities impacts associated with implementation of the projects listed in the RTP.

Public Services

Impact PS-1: Implementation of certain RTP roadway projects could temporarily interfere with transportation-related public services, such as police, fire, and/or emergency services and response times and/or access to other public facilities, including government facilities, schools, and parks due to temporary construction-related activities. This would be considered a **Class II, significant but mitigable**, impact.

Construction of certain RTP roadway projects could temporarily interfere with police, fire, and emergency response times, depending on the location, timing, and duration of construction activities due to temporary lane closures, installation of traffic control barriers, and rerouting of traffic through detours. Temporary access impacts to other public facilities, including government facilities, schools, and parks, may be affected by temporary construction-related impacts as well. These impacts would be considered **potentially significant**. In the long-term, however, emergency response times and access to public facilities can be expected to see **beneficial** impacts due to implementation of RTP improvements projects.

2019 RTP Goals, Policies, and/or Strategies that Serve to Reduce Potential Impacts

This EIR incorporates the 2019 RTP's goals, policy objectives, and action strategies as listed in 2019 RTP Chapter 3, which is included in **Volume II, Technical Appendices**. Included action strategies serve to: reduce potential impacts; improve accessibility to goods, services and jobs, and facilitate safe and convenient alternative forms of transportation in order to substantially reduce the rate of growth in vehicle trips and vehicle miles traveled and increase the use of alternative transportation modes; enhance the economic vitality, environmental sustainability, one's sense of community, and accessibility to basic human services within and between communities of the region; support most new residential development away from rural areas and concentrate it in more compact residential locations near major transportation corridors and transit routes, where resources and services are available; and, support the location of new mixed use projects and community and neighborhood commercial centers near major activity nodes and transportation corridors.

In addition, at the time of specific project-level environmental review, the lead agency shall ensure compliance with the following mitigation measures, through placement of conditions of approval on applicable projects, to reduce impacts to a less than significant level.

Mitigation Measures

MM PS-1: For all transportation projects that could result in temporary lane closures or access blockage during construction, a temporary access plan shall be implemented, in consultation with the County Office of Emergency Services (OES), in order to ensure continued access of emergency vehicles, or to carry out an evacuation.

Implementation of the above mitigation measures would be expected to reduce impacts to a **less than significant** level.

Solid Waste

Impact PS-2: Implementation of certain RTP roadway projects could affect demand for solid waste and wastewater services in the county. This would be considered a **Class II, significant but mitigable**, impact.

Construction of certain RTP projects could have the potential to generate a significant amount of solid waste during demolition and construction phases through demolition, grading, and excavation activities, resulting in a **potentially significant** impact. However, construction debris would be recycled or transported to the nearest landfill site and disposed of appropriately. In addition, the amount of debris generated during individual improvement project construction would need to be evaluated prior to construction on an individual project-by-project basis.

RTP projects are not anticipated to significantly affect wastewater facilities or create a significant impact on wastewater services; however, should a future project involve the construction of new restrooms, bicycle kiosks and facilities for recreation trails, there may be a potential impact on these facilities.

The County's General Plan contains policies aimed at reducing impacts associated with solid waste, specifically to "… *reduce waste from county operations."*

All of the cities and the county are members of the local Integrated Waste Management Authority (IWMA). As such, they are all committed to the regional/countywide diversion target. Within the member jurisdictions of the IWMA are three landfills: Cold Canyon, Chicago Grade, and Paso Robles.

2019 RTP Goals, Policies, and/or Strategies that Serve to Reduce Potential Impacts

There are no specific RTP goals or policies addressing project impacts related to solid waste and wastewater services in the county. At the time of specific project-level environmental review, the lead agency shall ensure compliance with the following mitigation measures, through placement of conditions of approval on applicable projects, to reduce impacts to a less than significant level.

Mitigation Measures

MM PS-2 The lead agency of a particular RTP project shall evaluate the impacts of demand on solid waste and wastewater services.

- Particular RTP projects requiring solid waste or wastewater services will coordinate with the local public works department to ensure that the existing public services and utilities would be able to accommodate the increase.

- The amount of solid waste generated during construction will be estimated prior to construction, and appropriate disposal and/or recycling sites will be identified and utilized in accordance with the criteria and diversion strategies established in the Integrated Waste Management Plan and respective local City Source Reduction and Recycling Element. Coordination is essential and highly recommended with appropriate agency staff where major transportation projects are concerned.

Compliance with the above mitigation measure would reduce impacts associated with solid waste and wastewater to a **less than significant** level.

3.12 POPULATION, HOUSING AND EMPLOYMENT

The population, housing, and employment setting is primarily based on applicable information incorporated in the 2050 Regional Growth Forecast, which was adopted in June 2017 by the SLOCOG Board, the certified SLOCOG 2014 RTP/SCS EIR, and previous EIRs prepared for projects in San Luis Obispo County.

Population

Most of the region's population is in four subregions: North Coast, North County, Central County, and South County; the latter three are centered along the US 101 corridor, while the North Coast is accessed by SR 1 enroute to the southern access to Big Sur. The region's projected growth in population, housing, and employment from 2015 to 2035 are shown in **Figure 3.12-1**, based on estimate data from California Department of Finance and projections prepared by Beacon Economics.

Figure 3.12-1: Population, Housing, and Employment Projections: Change from 2015 to 2035

PROJECTIONS AND CHANGE FROM 2015 TO 2035	POPULATION	HOUSING UNITS	HOUSEHOLDS	EMPLOYMENT
2015 Estimate	276,375	119,697	103,964	114,304
2035 Projection	312,346	135,129	118,788	128,512
Total Change	35,971	15,432	14,824	14,208
Average Annual Change	1,799	772	741	710
Total Percent Change	13.0%	12.9%	14.3%	12.4%
Average Annual Percent Change	0.65%	0.64%	0.71%	0.62%

Source: California Department of Finance, Demographic Research Unit (2015); Beacon Economics (forecasts); based on SLOCOG's 2050 Regional Growth Forecast.

The most recent population, housing, and employment forecast – the 2050 Regional Growth Forecast – was developed by Beacon Economics in partnership with SLOCOG in mid-2017. The forecast is developed based on local, regional, and national economic and demographic trends, historical data, local general plans and availability of vacant land, and other specific assumptions. Similar to previous forecast reports, the 2050 Regional Growth Forecast includes low, medium, and high growth scenarios. The medium growth scenario was supported by the SLOCOG Board; these figures are represented in **Figure 3.12-1** above (with change from 2015 to 2035) and **Figure 3.12-2** below (with change from 2015 to 2045).

Figure 3.12-2: Population, Housing, and Employment Projections: Change from 2015 to 2045

PROJECTIONS AND CHANGE FROM 2015 TO 2045	POPULATION	HOUSING UNITS	HOUSEHOLDS	EMPLOYMENT
2015 Estimate	276,375	119,697	103,964	114,304
2045 Projection	318,025	137,664	121,049	132,511
Total Change	41,650	17,967	17,085	18,207
Average Annual Change	1,388	599	570	607
Total Percent Change	15.1%	15.0%	16.4%	15.9%
Average Annual Percent Change	0.75%	0.75%	0.82%	0.80%

Source: California Department of Finance, Demographic Research Unit (2015); Beacon Economics (forecasts); based on SLOCOG's 2050 Regional Growth Forecast.

As shown in **Figure 3.12-1**, the San Luis Obispo region's population is expected to grow modestly from 2015 to 2035, at an estimated rate of 0.65 percent per year. As shown in **Figure 3.12-2**, the region's population growth from 2015 to 2045 is expected to be similarly modest, at an estimated rate of 0.5 percent per year. The region is expected to experience an estimated 13.0 percent growth in population from 2015 to 2035; and an estimated 15.1 percent growth in population from 2015 to 2045. Refer to the 2050 Regional Growth Forecast for additional demographic forecast information.

Housing

As noted in **Figure 3.12-1**, there are an estimated 119,700 housing units in San Luis Obispo County as of 2015. The region is forecasted to add approximately 15,400 housing units to accommodate the region's forecasted population growth by 2035. As noted in **Figure 3.12-2**, the region is forecasted to added approximately 18,200 housing units to accommodate the region's forecasted population growth by 2045.

Employment

As noted in **Figure 3.12-1**, there are an estimated 114,300 jobs in San Luis Obispo County as of 2015. The region is forecasted to add approximately 14,200 jobs by 2035. As noted in **Figure 3.12-2**, the region is forecasted to add approximately 18,200 jobs by 2045.

3.12.2 Regulatory Framework

The FHWA/FTA transportation planning regulations (23 C.F.R. Part 450 and 49 C.F.R. Part 613) require inclusion of the overall social and economic effects of transportation decisions (including consideration of the effects and impacts of the plan on human, natural, and man-made environment such as housing, employment, and community development, consultation with appropriate resource and permit agencies to ensure early and continued coordination with environmental resource protection and management plans, and appropriate emphasis on transportation-related air quality problems).

3.12.3 Impacts and Mitigation Measures

Standards of Significance

A population, housing, and employment impact is considered significant if implementation of the project would result in any of the following (based on State CEQA Guidelines Appendix G):

a) Induce substantial population growth in an area, either directly (for example, by proposing new homes and businesses) or indirectly (for example, through extension of roads or other infrastructure).

b) Displace substantial numbers of existing housing, necessitating the construction of replacement housing elsewhere.

c) Displace substantial numbers of people, necessitating the construction of replacement housing elsewhere.

Implementation of the RTP would create job opportunities resulting from construction projects (short-term) and maintenance of the proposed improvements (long-term), thereby resulting in an increase in the population and potential economic growth. However, the incremental growth associated with construction and maintenance of transportation system improvement projects listed in the 2019 RTP is not expected to be significant.

Methodology

The analysis herein is focused on the potential population, housing, and employment impacts associated with implementation of the RTP. It is based on a review of existing data including existing literature, jurisdiction's policies, programs, regulations and other various components, and publicly available documents, including previous EIRs prepared for projects within the county. The analysis recognizes the programmatic nature of the RTP; therefore, it focuses on the potential implications of the proposed policies of the RTP and not on the individual project-level effects of specific projects. The reader is directed to **Section 5.0, Cumulative Impacts,** of this EIR for analysis of cumulative impacts.

Project Impacts and Mitigation Measures

This section describes generalized population, housing, and employment impacts associated with implementation of the projects listed in the RTP.

Induce Population Growth

> **Impact POP-1:** Implementation of certain RTP roadway projects will not induce substantial population growth in an area. The proposed project will not directly result in new development of housing or employment centers or extend roads or other infrastructure that would expose substantial new areas to unplanned growth. This is considered a **Class III, less than significant**, impact.

Transportation system improvement projects identified in the RTP are expected to respond to growth anticipated by adopted local general plans, and the transportation planning process generally programs implementation of future system improvements in conjunction with planned growth.

The RTP implements some aspects of the circulation elements of the general plans of local jurisdictions in the region. Many of these projects could serve as traffic mitigation measures for anticipated growth under these local plans. Implementation of the RTP would not entail a substantial change in land use anywhere in the county. Rather, the plan responds to existing and projected transportation needs. The RTP does propose several new approaches to transportation planning, as described in **Section 2.0, Project Description**. These new approaches may set new precedents for transportation planning in the county; however, such approaches would not be expected to result in significant adverse environmental impacts. This is considered a **less than significant** impact.

2019 RTP Goals, Policies, and/or Strategies that Serve to Reduce Potential Impacts
None.

Mitigation Measures
None required.

Displacement of Existing Housing Units, People, and Businesses

> **Impact POP-2:** : Implementation of some RTP projects is not expected to result in the displacement of people and/or existing housing units, as well as businesses, and further, would not result in the need to construct additional housing units in the county over the planning horizon. This is considered a **Class III, less than significant**, impact.

Implementation of some transportation system improvement projects (particularly those involving roadway widenings and extensions) could require the removal or relocation of existing structures to accommodate proposed improvements. This could require the acquisition of property from private owners to provide adequate right-of-way and may result in the permanent displacement of existing housing units and the people currently living in them, as well as existing businesses. Displacement would occur most commonly in urban portions of the county, where roads would expand into previously developed areas.

If the alignment does displace residences, the appropriate jurisdiction would be subject to California relocation assistance law. The state adopted the California Relocation Assistance Act in 1970 and requires public entities to provide relocation assistance and payments prior to displacement of residents. (California, State of 1970) Prior to resident displacement, the lead agency must:

- Adopt relocation rules and regulations;
- Provide certain determinations and assurances; and
- Adopt a detailed relocation plan.

In compliance with California law (Government Code Sections 7260 et seq.), the lead agency for a particular project would implement a relocation program for persons that would be displaced by the proposed project in compliance with the California Relocation Assistance Act in 1970.

The relocation program consists of multiple procedures and requirements. As part of a relocation program, the lead agency would retain the services of consultants to coordinate and implement relocation activities, including performing an appraisal, and would purchase property within the boundaries of the selected site. No one lawfully occupying property will be required to move without 90 days written notice. The lead agency will pay moving and related expenses as detailed in the Relocation Assistance Act**.**

2019 RTP Goals, Policies, and/or Strategies that Serve to Reduce Potential Impacts
None.

Mitigation Measures
None required.

3.13 TRANSPORTATION AND CIRCULATION

This chapter provides a brief overview of the existing transportation setting and characteristics, the regulatory setting, as well as a description of potential transportation impacts and mitigation. Please refer to the proposed RTP for a more thorough discussion of the transportation system. A major focus in this chapter are the changes to the thresholds of significance that have come about recently with the recent release of the 2018 CEQA Guidelines, specifically those dealing addressing transportation. Levels of Service (LOS), has been the most widely used criterion for determining roadway function, as well as impact levels as part of CEQA environmental analysis. More recently, Vehicles Miles Traveled (VMT) has been increasingly recognized as a better measure of system performance. This new emphasis is reflected in the CEQA Guidelines and is thereby incorporated into the analysis herein.

3.13.1 Existing Setting

Existing transportation opportunities offer different travel times and levels of safety such as motorized transportation on the county's roadway network and active transportation on bicycle and pedestrian networks. Rail transportation in the county includes commuter and recreational rail transportation to areas north and south in the state.

The county's mild climate, rolling terrain, and expanse of unincorporated areas make it a desirable location for recreational bicycling as well as bike commuting. A bikeway is defined as any road or path specifically designated as being open to bicycle travel, whether officially designated or not. SLOCOG has acquired funding or planned several bikeway and/or multi-use trail projects such as the Bob Jones Multi-Use Trail, Pismo Beach Promenade, Morro Bay Waterfront Boardwalk, Morro Bay to Cayucos Connector, and Atascadero to Templeton Connector Multi-Use Trails. The 2016 County Bikeways Plan identifies approximately 168 miles of designated bicycle lanes in the county and another 173 miles of proposed bicycle lanes (101 miles Class III, 64 miles Class II, and 3 miles Class I).

Existing Traffic Characteristics

During the several years since the last update of the RTP, the region has made progress in improving the regional transportation system by enhancing intermodal connections. In response to the findings of the US 101 Mobility Master Plan (2014) new park-and-ride lots have been planned and established, the regional ridesharing program has expanded substantially, new bike lanes have been constructed to connect and expand existing networks, the Pacific Surfliner rail service provides services to Grover Beach and San Luis Obispo twice a day, and Amtrak service continues to support Paso Robles as well as at the historic stop in San Luis Obispo. Several construction projects have been completed since the 2014 RTP adoption to keep up with existing demand and projected use, e.g., the widening of State Route 46 east, the widening of Price Canyon Rd., reconstruction of the US 101-Los Osos Valley Rd. interchange, and the San Juan Creek Bike and Pedestrian Bridge in Shandon.

The current San Luis Obispo County transportation network includes facilities for private automobiles, bus transit, bicycles, pedestrians, specialized transportation for seniors and people with physical or mental disabilities, freight on trucks and rail, and business and recreational use of an airport, waterways, and trails. The San Luis Obispo region has 1,850 center line miles of local roads: 1,294 miles

are the responsibility of the County and 556 miles the responsibility of the cities. It should be noted that due to its location, natural amenities, and temperate weather, San Luis Obispo County is a popular tourist destination, resulting in temporary traffic increases during peak tourist periods (generally, the summer months). The Santa Lucia Mountain Range has a major effect on travel in the county because of the way it separates the northeastern and southwestern areas of the region and the North Coast and North County. Three highways — US Highway 101 and State Routes 41 West and 46 West — must cross this range. This physical barrier affects all forms of transportation as well as weather, landscape types, agricultural practices, economic development, and lifestyles.

The County's 2014-16 Annual Resource Summary Report evaluated roads under County jurisdiction in the North County, South County, and North Coast areas. The North County planning area does not have any roads with level of severity concerns. Recommended Level of Severity III roads in South County include Halcyon Road, south of Arroyo Grande Creek, which operates below LOS C due to the intersection operations at Halcyon Road/State Route (SR) 1, and Tank Farm Road, west of SR 227. The City of San Luis Obispo is planning to widen Tank Farm Road to four lanes as well as construct the extension of Prado Rd. between South Higuera and Broad St., which would address the LOS concerns on this roadway. On the North Coast, South Bay Boulevard south of State Park Road is recommended for Level of Severity III, and to address this issue, the South Bay Circulation Study proposes widening of South Bay Boulevard from Los Osos Valley Road to the Urban Reserve Line; however no funding is readily available to do so.

Major Highway Corridors in San Luis Obispo County

US Highway 101.
US 101 is the north-south backbone of interregional and subregional circulation in the county. It runs for 69 miles from the Santa Barbara county line to the Monterey county line, crossing the Santa Lucia Mountain Range at the approximate mid-point of the county on Cuesta Pass. US 101 provides a direct link between six of the seven incorporated cities in the county. The Cuesta Pass has a grade in excess of 7 percent. In 2003 a northbound climbing lane and southbound lane for slow vehicles descending the steep hill were constructed. In the south-bound direction approaching the Cuesta Pass, the highway is an emerging bottleneck during the a.m. peak-hour. Most of the interchanges along this corridor were constructed as tight diamond designs with two-lane bridge structures and nearby frontage roads.

State Route 1.
This route is a two- to four-lane rural arterial running for about 58 miles between its north junction with US 101 to the Monterey county line and about 15 miles between the Santa Barbara county line and its south junction with US 101. It is not a State Highway Extra Legal Load (SHELL) route. The Caltrans *1986 Route Concept Report* refers to the road as a rural minor arterial and a scenic route. The route was designated both a state scenic highway and a National Scenic Byway. The route primarily serves interregional traffic, much of it tourist in nature, although commute traffic is predominant between San Luis Obispo and Morro Bay. Traffic volumes on SR 1 are highest in the portions within and adjacent to the City of San Luis Obispo between Foothill Boulevard and North Junction with US 101. Average daily trips on SR 1 are lowest near the county borders, south of Arroyo Grande and north of San Simeon.

State Route 41 East.
This corridor is a two-lane rural major collector that extends 35 miles between its junction with US 101 in Atascadero and the Kern county line. It is not a State Highway Extra Legal Load (SHELL) route.

State Route 41 West.
This corridor is a two-lane rural arterial running for about 16 miles between its junction with SR 1 in north Morro Bay and US 101 in Atascadero. The route is not designated a State Highway Extra Legal Load (SHELL) route nor is it an oversize truck route.

State Route 46 East.
This corridor is a two-lane principal arterial and, in places, 4-lane separated roadway, extending 31 miles between US 101 in Paso Robles and the Kern county line. Traffic on this corridor is interregional, serving a substantial amount of recreational and truck traffic to and from the central valley. The route is included in the National Highway System (NHS). It is a State Highway Extra Legal Load (SHELL) route, a National Security Route, and the busiest east/west crossing between the Central Valley and the Coast from the Pacheco Pass to the Grapevine.

State Route 46 West
This corridor is a two-lane minor arterial that runs for about 22 miles between its junction with SR 1 near Cambria (Milepost 0.15) and its junction with US 101 (Milepost 21.97) south of Paso Robles. Caltrans has designated the road, which passes through mountainous terrain over the Santa Lucia Range, as conventional highway/expressway.

Arterial Roadways in San Luis Obispo County
Arterial roadways provide corridors for through traffic, and many feed into the highway network. Most of these routes are served by bus transit and have marked bicycle lanes. Examples of arterials in the county include Niblick Road, El Camino Real, Burton Drive, South Bay Boulevard, Higuera Street, Los Osos Valley Road, Grand Avenue, Halcyon Road, and Willow Road. As with the state highways in the county, the highest traffic volumes on arterial roadways are found on arterials leading to major attractors in the county.

For more information about surface transportation network and the existing conditions and planned improvement, see the Regional Transportation Plan, Chapter 9: AE Highway, Streets, and Roads.

Public Transportation

A practical, easy-to-use public transportation system is fundamental in promoting regional mobility, minimizing traffic congestion, improving air quality, and reducing reliance on personal automobiles. Public transportation in the San Luis Obispo region encompasses publicly funded (in part or in full) and privately run (nonprofit or for profit) operators, including several forms of volunteer-based programs. For more information about the six fixed route transit providers and their services and other mobility options available in the region, see the Regional Transportation Plan, Chapter 11: AE Public Transportation.

Active Transportation

SLOCOG acknowledges the many benefits active transportation brings to the region and supports the ambitious state targets to: double walking, triple bicycling, and double transit use in the state by 2020 (compared to 2010); reduce bicycle and pedestrian fatalities by 10 percent per year; and increase the number of complete streets projects by 20 percent. *Active transportation* refers to human powered transportation. There are many examples of active transportation: walking, bicycling, pushing baby strollers, wheelchairs, e-scooters. For the purposes of this RTP, active transportation refers to walking and bicycling. There are many benefits acquired through active transportation, including alleviating traffic congestion, reducing vehicle emissions, enhancing a downtown's economic vitality, and impacting a neighborhood's crime rate. Active transportation produces human co-benefits as well, such as reductions in household transportation costs, daily/weekly stress, childhood obesity rates, and blood pressure. For a more detailed description of the active transportation landscape, and planning, and funding approach for the region, please see RTP Chapter 10: AE Active Transportation.

Air Transportation

The San Luis Obispo region has three publicly owned and operated airports: the San Luis Obispo County Regional Airport, a commercial service facility operated by the County; Paso Robles Municipal Airport, a general aviation facility operated by the City of Paso Robles; and Oceano Airport, a basic utility, general aviation facility owned by the County and operated by a concessionaire. There are two military airports, Camp Roberts and Camp San Luis Obispo, and several private airports that are either closed to the public or have restricted use.

Harbors

San Luis Obispo County has three harbors: Port San Luis, Morro Bay, and San Simeon. The harbors in the region accommodate petroleum shipping, commercial fishing, and recreational boating. There are no general cargo or passenger ship terminals in the region. Commercial fishing activity is centered at Morro Bay and Port San Luis (Avila Beach). Sport fishing boats also operate from these harbors as well as from San Simeon Harbor. Recreational boating is popular at each of these locations, with berths and moorings at Port San Luis and Morro Bay presently being at or near rental capacity. Port San Luis, Morro Bay, and San Simeon have each been designated as a Harbor of Refuge by the State of California. Port San Luis is also a United States Customs Port of Entry.

Marine Terminals

Marine terminals, located in harbors, are part of the transportation network used to transport crude oil and refined petroleum products. They are used to load and/or unload crude oil or refined products onto or off of tankers. There were historically five marine terminals in San Luis Obispo County, four of which have now been closed. At Estero Bay there were four operating marine terminals. Chevron and Texaco had terminals to load crude and product, and the U.S. Navy had a terminal to unload product. Pacific Gas and Electric (PG&E) still has a terminal to unload product. Unocal had a terminal at Port San Luis that has now been closed.

Rail Transportation

There are two types of railway transportation used in the region: passenger rail service and commodities movement (i.e., freight). Currently, our region's corridor serves both purposes. The Union Pacific Railroad line enters the county near State Route 1 north of Guadalupe and parallels State Route

1 heading north to U.S. Highway 101 at Price Canyon Road. The route follows Price Canyon Road to State Route 227, through San Luis Obispo, and over the Cuesta Grade where the tracks parallel the Salinas River and U.S. Highway 101 to the Monterey County line and beyond.

Passenger Rail Services

Coast Starlight

Amtrak's Coast Starlight train serves the corridor from Los Angeles through the San Luis Obispo region to Seattle, Washington. It is one of the busiest long-distance trains in the nation, with one passenger train traveling northbound and one traveling southbound through the San Luis Obispo region each day. The Coast Starlight provides a total of four stops per day in the county: two in the City of San Luis Obispo and two in the City of Paso Robles, each in the mid-afternoon. Despite this relatively limited rail service, the Coast Starlight attracts heavy use from county residents. Ticketing policies provide preference to long-distance travelers to maximize seat revenue, making it difficult to board the train from San Luis Obispo during the summer months.

Pacific Surfliner

The Pacific Surfliner provides two frequencies to/from San Luis Obispo (and Grover Beach) and Southern California. The service provides a morning departure from San Luis Obispo and Grover Beach to Santa Barbara, Los Angeles, and San Diego, with an evening return. The service also includes a total of eight bus connections to meet trains that begin (or end) in other cities: four to the Pacific Surfliner trains, two to Capitol Corridor trains, and two to San Joaquin trains. Unstaffed intercity rail platforms and stations were constructed in Grover Beach and Paso Robles in 1996.

Coast Daylight (Proposed)

This train would serve the corridor from Los Angeles through the San Luis Obispo region to downtown San Francisco. The existing train leaving Los Angeles at 7:30 a.m. and arriving in San Luis Obispo at 12:45 p.m. would be extended to downtown San Francisco, arriving around 7:00 p.m.

Commodities Movement

The only railway through San Luis Obispo County is the Union Pacific track, which runs north and south. Local rail business has declined in the county, with an increasing emphasis on intermodal shipping and centralized distribution facilities. As a result, fewer and fewer industries continue to receive boxcar deliveries. Freight train activity at the local level is limited to a triweekly local train operating between Salinas and Santa Margarita and two local switchers operating between Guadalupe and San Luis Obispo and between Guadalupe and Lompoc to serve Vandenberg Air Force Base.

Rail Safety

Throughout the county there are over 20 at-grade railroad crossings with roads, and seven of these are on routes of regional significance. The at-grade intersections have a combination of signs, lights, and safety gates.

At-grade railroad crossings on routes of regional significance occur in the following locations:

- Grand Avenue in Grover Beach
- Orcutt Road in San Luis Obispo
- Marsh Street in San Luis Obispo
- Foothill Boulevard in San Luis Obispo

- SR 58 in Santa Margarita
- Curbaril Avenue in Atascadero
- 13th Street in Paso Robles

At-grade railroad crossings along other roadways in the county occur in the following locations:

- Division Street southwest of Nipomo
- Oso Flaco Lake Road west of Nipomo
- Willow Street in Oceano
- 22nd Street in Oceano
- Railroad Street in Oceano
- Wilhelmina Avenue in Santa Margarita
- Encina Avenue in Santa Margarita
- Santa Clara Road south of Atascadero
- Ferrocarril Road in Atascadero
- Phillips Road in Templeton
- 10th Street in Paso Robles
- 12th Street in Paso Robles
- 16th Street in Paso Robles
- 21st Street in Paso Robles
- Wellsona Road in Wellsona
- 11th Street in San Miguel
- 14th Street in San Miguel

It should be noted that there are additional at-grade crossings on private roads throughout the county.

3.13.2 Regulatory Framework

Federal

The FAST Act, approved in December 2015, is the first federal reauthorization in over 10 years to provide a longer-term of federal funding certainty for surface transportation. Funded through the highway trust fund (HTF), the $305 billion, five-year act is funded without increasing transportation user fees and provides guaranteed funding for federal surface transportation programs until September 2020. This law replaced the prior Transportation Reauthorization, *Moving Ahead for Progress in the 21st Century Act* (MAP-21) which began in July 2012.

State

State guidelines generally set the framework for regional and local planning efforts. State law requires the regional and local planning agencies to develop and submit a Regional Transportation Plan (RTP) every four years to the California Transportation Commission (CTC) and the California Department of Transportation (Caltrans).

Local

County General Plan

The San Luis Obispo County General Plan covers Transportation to specifically addresses issues of traffic and circulation.

County Bikeways Plan
The County of San Luis Obispo and several cities within the county have developed bicycle transportation plans in accordance with the California Bicycle Transportation Act (Streets and Highways Code Section 980-894.2). The County Bikeways Plan, prepared by the Department of Public Works Bicycle Advisory Committee, was last updated in 2016. The County Plan discusses bikeway routes, accessory facilities such as bike parking, coordination with other modes of transportation, promotional and educational programs, and potential funding sources for these facilities and programs.

3.13.3 Impacts and Mitigation

Measures
Standards of Significance

A transportation and circulation impact is considered significant if implementation of the RTP would result in any of the following:

a) Conflict with an applicable plan, ordinance, or policy establishing measures of effectiveness for the performance of the circulation system, taking into account all modes of transportation including mass transit and non-motorized travel and relevant components of the circulation system, including but not limited to intersections, streets, highways and freeways, pedestrian and bicycle paths, and mass transit.
b) Conflict with an applicable congestion management program, including, but not limited to level of service standards and travel demand measures, or other standards established by the county congestion management agency for designated roads or highways.
c) Result in a change in air traffic patterns, including either an increase in traffic levels or a change in location that results in substantial safety risks.
d) Substantially increase hazards due to a design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment).
e) Result in inadequate emergency access.
f) Conflict with adopted policies, plans, or programs supporting alternative transportation (e.g., bus turnouts, bicycle racks).

The following addresses the above thresholds:

- With regard to (a) and (b), above, pursuant to California Environmental Quality Act (CEQA) Guidelines Appendix G, as Amended 2019, the aforementioned performance standards insofar as they rely on LOS, such metrics would only be one of many considerations and would not, by itself, indicate a significant impact. Further, the RTP contains strategies and programs that would improve the current transportation network through traffic reduction measures and increased connectivity, the RTP would encourage more compact and higher density development.
- The RTP includes non-motorized transportation projects for the region and implements policies associated with alternative modes of transportation. Such measures encourage multi-modal transportation choices, facilitates transit and transit oriented development, consistent with the concept of "complete streets." This approach can encourage higher densities and slower speeds, which may conflict with congestion management goals. However, this would not result in a significant impact per the new CEQA Guidelines, as noted above.

- The RTP does not propose any changes in air traffic patterns.

- Regarding "Substantially increase hazards due to design features" - All improvements under the RTP will be designed to the specifications of Caltrans and/or the implementing agency's roadway standards, as appropriate. As such, the proposed project is not anticipated to cause a substantial increase in hazards due to design features or incompatible uses.

- Result in inadequate emergency access - emergency access could potentially be affected during construction activities associated with implementation of the various roadway and transit improvement projects identified in the RTP. However, the implementing agency for each improvement project would be responsible for coordinating with the emergency providers to ensure that emergency routes remain available during construction activities. The RTP does not propose any specific projects that are believed to result in inadequate emergency access. The RTP would provide increased regional connectivity and should improve movement of emergency vehicles.

- Conflict with adopted policies, plans, or programs supporting alternative transportation - The RTP includes active transportation projects for the region, including bicycle/pedestrian projects that would carry out components of the County's and incorporated communities' bicycle plans and would implement local policies associated with alternative modes of transportation. The proposed RTP is designed to be consistent with adopted regional plans, including active transportation plans.

Methodology

The analysis herein is focused on the potential traffic and circulation impacts associated with implementation of the RTP. It is based on a review of existing data including the member agency's adopted General Plans, Bike Plans, policies, programs, regulations and other various components, and publicly available documents. The analysis recognizes the programmatic nature of the RTP; therefore, it focuses on the potential implications of the proposed policies of the RTP and not on the individual project-level effects of specific projects. **Section 5.0, Cumulative Impacts,** of this EIR addresses cumulative impacts.

Until recently, LOS thresholds were used to determine the level-of-significance related to congestion impacts. LOS, as it relates to a measure of congestion, is now only one of many considerations to be applied in determining significance related to traffic impacts, per the 2019 Revised CEQA Guidelines, as noted earlier, as well as below.

Impacts and Mitigation Measures

As previously discussed, this is a "Program" EIR, which focuses primarily on the potential implications of the proposed RTP policies, versus individual project-level effects. It is entirely likely that some of the RTP projects may conflict with congestion management agency goals associated with reducing congestion using the LOS metric. However, the new CEQA Guidelines focus on using VMT instead of LOS. The new Guidelines confirm that vehicle delay is not a significant impact (Guidelines Sec. 15064.3 (a). The Guidelines

Appendix G deletes questions focused on delay and congestion management, instead requiring consideration of transit, bicycle, and alternative modes.

The proposed RTP's Preferred Growth Scenario prioritizes reductions in VMT and these total reductions over the long-term are supported in the RTP. In general, the roadway and intermodal improvements proposed in the RTP are intended to reduce vehicle trips and travel distances.

In consideration of the above Growth Scenario, coupled with the fact that this is a Program EIR, necessarily focused on proposed RTP policies, versus project-level effects, significant transportation impacts from implementation of the RTP are not expected. Notwithstanding that, subsequent project-specific CEQA and/or environmental review should select a specific VMT threshold level to apply at that time, in addition to other criteria which might apply, depending upon the nature of the project and circumstances involved.

Please refer to the RTP (herein incorporated by reference for additional discussion of the Preferred Growth Scenario, along with supporting assumptions, including projected VMT

2019 RTP Goals, Policies, and/or Strategies that Serve to Reduce Potential Impacts
This PEIR incorporates the 2019 RTP's goals, policy objectives, and action strategies as listed in 2019 RTP Chapter 3 which is included in **Volume II, Technical Appendices**. Included action strategies serve to: to improve LOS levels and decrease VMT and VHT in the region through the implementation of congestion programs and alternative transit improvement programs.

These policies, complemented with SLOCOG investments in transit and ride-sharing programs, active transportation (bicycle and pedestrian) improvements, and other travel demand management measures, would help improve future VMT and VHT, and generally, LOS as well.

Mitigation Measures
None.

3.14 WATER RESOURCES

The water resources setting is primarily based on applicable information provided by the County's 2010 Conservation and Open Space Element (COSE), (SLO County 2010a), the certified SLOCOG 2010 RTP EIR (SLOCOG 2010), and previous EIRs prepared for projects in San Luis Obispo County.

3.14.1 Existing Setting

Water Supply

In general, water supplies in San Luis Obispo County have been and continue to be limited. Long-term average annual yields of the surface reservoir, as currently constructed, are fixed amounts that are subject only to further downward adjustments due to siltation. In addition, groundwater supplies are limited in terms of the annual amount of water that can be withdrawn without causing a long-term drop in water levels (Safe Yield) and in the total storage of a basin that can be removed without significant environmental effects (Available Yield). Such water source limitations make water conservation a necessity in the county.

Water Sources

San Luis Obispo County obtains nearly 80 percent of its water supply from groundwater. Only 2 percent of the county's supply comes from imported water and the remaining 17 percent of water supply comes from surface waters. The county's 28 groundwater basins include:

- Arroyo de la Cruz Valley
- Big Spring Area
- Carrizo Plain
- Cayucos Valley
- Cholame Valley
- Chorro Valley
- Cuyama Valley
- Huasna Valley
- Los Osos Valley
- Santa Maria River Valley
- Old Valley
- Piedras Blancas Point
- Paso Robles Creek
- Arroyo Grande Valley
- Pismo Creek Valley
- Rafael Valley
- Rinconada Valley
- Pozo Valley
- San Carpoforo Valley
- San Luis Obispo Valley
- San Simeon Point
- San Simeon Valley
- Santa Rosa Valley
- Tierra Redonda Mountain
- Toro Valley
- Villa Valley
- Salinas Valley Paso Robles Sub-basin
- Point Buchon

In the late 1980s, a drought brought increased awareness of groundwater issues in the county. Due to a lack of surface water supplies at the time, the county was forced to rely more heavily on groundwater supplies, drawing attention to the risks associated with this choice of water supply, particularly in coastal areas. Many of the county's coastal communities are facing existing or potential seawater intrusion in their groundwater sources. This issue is particularly acute in the Los Osos Valley, Cambria, and the Nipomo area.

There are nine major watersheds in San Luis Obispo County and twelve water planning areas (WPAs) in the county's 3,304 square miles. The water planning areas are:

- North Coast
- Cayucos
- Los Osos/Morro Bay
- San Luis Obispo/Avila
- Five Cities
- Nipomo Mesa
- Cuyama
- California Valley
- Salinas
- Creston
- Shandon
- Nacimiento

Water Quality

Most of San Luis Obispo County's water quality is better than in many other areas of the state. However, the region also faces water quality challenges, such as wastewater compliance, groundwater pollution from septic systems and other activities, and seawater intrusion.

Salinity and hardness are the water quality issues most frequently encountered in the county. The most acute water quality issue may be found in the community of Los Osos, which has been subject to seawater intrusion for a number of years. The seawater intrusion has been estimated as migrating 100 feet per year, and the Los Osos Community Service District is currently studying and monitoring the intrusion and developing a management program.

Seawater intrusion in the coastal basin containing Grover Beach, Arroyo Grande, and Pismo Beach is currently covered by a 2002 agreement in which 220 acre-feet per year of basin yield is allocated for protection against intrusion. The Nipomo area has also been identified as at risk for seawater intrusion. Monitoring in this area is just beginning, but a significant data gap exists.

Other water quality issues of concern in the county are sedimentation, nitrate contamination, heavy metal contamination, and oil contamination. In 2006, the County completed a Stormwater Management Plan (SWMP) in response to U.S. Environmental Protection Agency (USEPA) requirements. While not technically a regional SWMP, the plan is coordinated with other local municipal efforts. The SWMP outlines existing issues and identifies best management practices for stormwater. A Stormwater Management Program is currently underway, providing opportunities for water conservation at the countywide level.

Flood Control

Flood severity can be increased by fires in the watershed area, structures or fill placed in flood-prone areas, and increased runoff resulting from development of impervious surfaces (such as parking lots, roads, and roofs). Floodplains are usually described as areas that have a 1 percent chance of being submerged in any year, which is often referred to as the "100-year flood."

Flooding and its effects are issues of concern throughout San Luis Obispo County, as a number of water courses flood during periods of heavy rain. This section will describe potential flooding hazards, as well as locations throughout the County where these conditions may occur. Winter storms bring large amounts of runoff to areas not accustomed to high flows and often to areas damaged by summer fires.

The San Luis Obispo County Flood Control and Water Conservation District completed periodic studies for the communities of Cambria, Cayucos, Nipomo, Oceano, San Miguel, and Santa Margarita. These communities have been identified as critical areas for flood control, primarily the result of lack of

infrastructure. However, the problem stems from the loss and restriction of the floodplain due to development.

3.14.2 Regulatory Framework

Applicable federal, state, and local regulations that apply to hydrology and water quality in the County of San Luis Obispo are identified below.

Federal

Clean Water Act

The Clean Water Act (CWA) is the primary federal law that protects the quality of the nation's surface waters, including lakes, rivers, and coastal wetlands. It operates on the principle that all pollutant discharges into the nation's waters are unlawful unless specifically authorized by a permit; permit review is the CWA's primary regulatory tool.

Total Maximum Daily Loads

Under CWA Section 303(d) and California's Porter-Cologne Water Quality Control Act of 1969 (discussed below), the State of California is required to establish beneficial uses of state waters and to adopt water quality standards to protect those beneficial uses. Section 303(d) establishes the Total Maximum Daily Load (TMDL) process to assist in guiding the application of state water quality standards. It requires states to identify waters whose water quality is "impaired" (affected by the presence of pollutants or contaminants) and to establish a TMDL or the maximum quantity of a particular contaminant that a water body can assimilate without experiencing adverse effects on the beneficial use identified. TMDLs are generally stakeholder-driven processes that involve investigation of sources and their loading (pollution input), make load allocations, and identify an implementation plan and schedule.

The municipal and domestic water supply beneficial use (MUN) is exceeded in various areas of the county, primarily due to high nitrate concentrations. The Basin Plan, which establishes objectives for beneficial uses, is developed by the State Water Resources Control Board (SWRCB) along with the Regional Water Quality Control Boards, in this case, Central Coast Regional Water Quality Control Board (CCRB).

Water bodies, such as Los Osos Creek, Chorro Creek, Morro Bay, and San Luis Obispo Creek continue to have high TMDL priorities related to agricultural runoff, land development, road construction and others. **Figure 3.14-1**, below, reflects TMDLs developed or in development in San Luis Obispo County. The affected TMDLs, include those for pathogens, sediments, dissolved oxygen, and nutrients. Road construction and operations constitute a significant portion of the aforementioned pollutants.

Figure 3.14-1: TMDLs Developed or in Development for San Luis Obispo County

TMDL	Status
Morro Bay TMDL and Implementation Plan for Pathogens, Including Chorro and Los Osos Creeks	Final approval January 20, 2004
	November 19, 2003 effective date
Morro Bay TMDL and Implementation Plan for Sediment Including Chorro Creek, Los Osos Creek and the Morro Bay Estuary	Final approval January 20, 2004
	December 3, 2003 effective date
Dairy Creek Dissolved Oxygen TMDL	Approved RWQCB December 3, 2004
Los Osos Creek Nutrient TMDL	Approved RWQCB December 3, 2004
San Luis Obispo Creek Pathogen TMDL	Approved RWQCB December 3, 2004
Chorro Creek Nutrient TMDL	In progress
Chumash Creek Dissolved Oxygen TMDL	In progress
Las Tablas Creek Mercury TMDL	In progress
Los Osos Creek and Warden Creek	In progress
Dissolved Oxygen TMDL	
Morro Bay Metals	Proposal to delist in progress
San Luis Obispo Creek Nutrient TMDL	In progress
Santa Maria and Oso Flaco Fecal Coliform TMDL	In progress
Santa Maria and Oso Flaco Nitrate TMDL	In progress
Salinas River Fecal Coliform TMDL (includes Atascadero Creek)	In progress
Regional Sediment Assessment	Under investigation

Source: SLO County 2007e

National Pollutant Discharge Elimination System

As authorized by the Clean Water Act, the National Pollutant Discharge Elimination System (NPDES) permit program controls water pollution by regulating point sources that discharge pollutants into waters of the United States. There are two general permits for stormwater dischargers. One permit applies to industrial dischargers and the other permit relates to construction activities.

NPDES was established by the CWA to regulate municipal and industrial discharges to surface waters of the United States. Each NPDES permit contains limits on allowable concentrations and mass emissions of pollutants contained in the discharge. Sections 401 and 402 of the CWA contain general requirements regarding NPDES permits. Section 307 of the CWA describes the factors that the USEPA must consider in setting effluent limits for priority pollutants.

The purpose of the NPDES program is to establish a comprehensive stormwater quality program to manage urban stormwater and minimize pollution of the environment to the maximum extent practicable. The NPDES program consists of (1) characterizing receiving water quality, (2) identifying

harmful constituents, (3) targeting potential sources of pollutants, and (4) implementing a Comprehensive Stormwater Management Program (CSWMP).

Individual NPDES Permits
All point source discharges to waters of the United States not covered by a general permit are required to apply for an individual NPDES permit with the Regional Water Quality Control Board (RWQCB). The RWQCB then issues waste discharge requirements (WDRs) and monitoring provisions to ensure compliance with CWA standards. The RWQCB will deny or limit a mixing zone and dilution credit as necessary to protect the beneficial use of state waters.

U.S. Bureau of Reclamation
The U.S. Bureau of Reclamation is a water development and management agency established in 1902 in the western United States. The Bureau of Reclamation is primarily known for the role in developing massive water projects, such as dams and hydroelectric power generation. The Bureau of Reclamation is the largest water wholesaler in the country, serving 31 million people. San Luis Obispo County is located in the Bureau of Reclamation's Mid-Pacific Region.

Federal Flood Insurance Program
Congress, alarmed by increasing costs of disaster relief, passed the National Flood Insurance Act of 1968 and the Flood Disaster Protection Act of 1973. The intent of these acts is to reduce the need for large publicly funded flood control structures and disaster relief by restricting development on floodplains. The Federal Emergency Management Agency (FEMA) administers the National Flood Insurance Program (NFIP) to provide subsidized flood insurance to communities that comply with FEMA regulations limiting development on floodplains. FEMA issues Flood Insurance Rate Maps (FIRMs) for communities participating in the NFIP. FIRMs delineate flood hazard zones in the community.

Executive Order 11988
Executive Order 11988 (Floodplain Management) addresses floodplain issues related to public safety, conservation, and economics. It generally requires federal agencies that are developing, permitting, or funding a project in a floodplain to do the following:

- Avoid incompatible floodplain development.
- Be consistent with the standards and criteria of the NFIP.
- Restore and preserve natural and beneficial floodplain values.

State

Porter-Cologne Water Quality Control Act
The Porter-Cologne Water Quality Control Act, passed in 1969, articulates the federal CWA (see Clean Water Act above) for California. It established the State Water Resources Control Board (SWRCB) and divided the state into nine regions, each overseen by an RWQCB. The SWRCB is the primary state agency responsible for protecting the quality of the state's surface and groundwater supplies, but much of its daily implementation authority is delegated to the nine RWQCBs, which are responsible for implementing CWA Sections 401, 402, and 303(d). In general, the SWRCB manages statewide regulation of water quality, while the RWQCBs focus exclusively on water quality within their regions. San Luis

Obispo County is in Region 3, which is administered by the Central Coast Regional Water Quality Control Board (CCWB).

Basin Plans and Water Quality Objectives

The Porter-Cologne Act provides for the development and periodic review of water quality control plans (basin plans) that designate beneficial uses of California's major rivers and groundwater basins and establish narrative and numerical water quality objectives for those waters. Basin plans are primarily implemented by using the NPDES permitting system and the issuance of WDRs to regulate waste discharges so that water quality objectives are met (see discussion of the NPDES system in the Clean Water Act subsection above). Basin plans are updated every three years. They provide the technical basis for determining waste discharge requirements and taking regulatory enforcement actions if deemed necessary.

Site-Specific Water Quality Objectives

Due to site-specific variations in water chemistry, the toxicity of a contaminant to aquatic life may deviate from adopted water quality objectives in a particular water body. As a result, various water bodies may require more or less protection to achieve optimal water quality. For this reason, the SWRCB and USEPA allow site-specific water quality objectives. At this time in California, the only way to obtain a site-specific water quality objective is through an amendment to the relevant basin plan, which tends to be a time-consuming proposition. The SWRCB is currently considering whether to extend this authority to individual NPDES permits. In either case, a process exists whereby a site-specific water quality objective may be sought to allow for a higher discharge limit than would otherwise be possible.

Waste Discharge Requirements

It is the responsibility of the water boards to preserve and enhance the quality of the State's waters through the development of water quality control plans and the issuance of waste discharge requirements (WDRs). The Porter-Cologne Act provides for the issuance of WDRs. This requirement is very similar to the National Pollution Discharge Elimination System (NPDES) program under the federal Clean Water Act, and in most cases, the two processes are combined by the RWQCBs. However, the Porter-Cologne Act definition of discharge is somewhat broader than the CWA; in addition, waters of the State include certain water bodies that are not waters of the United States. As a result, certain discharges are solely regulated under the Porter-Cologne Act. The SWRCB has adopted general WDRs for land application of biosolids, discharges to isolated wetlands, and land discharge of groundwater or surface water from cleanup of petroleum pollution.

For example, on September 2, 2009, the SWRCB, Division of Water Quality adopted Order 2009-0009-DWQ, the *NPDES General Permit For Storm Water Discharges Associated With Construction and Land Disturbance Activities*. All discharges of storm water and non-storm water from construction sites are prohibited except those specifically authorized by the General Permit or another NPDES permit. The new General Permit became effective on July 1, 2010.

The Storm Water Pollution Prevention Plan (SWPPP) must be developed to meet site-specific objectives. These include, but are not limited to, descriptions of the project and site, construction schedule, the efficacy of site-specific Best Management Practices (BMPs), support for selecting BMPs, and Rain Event Action Plans. Dischargers must appoint a Qualified SWPPP Developer (QSD), and a Qualified SWPPP Practitioner (QSP) to oversee implementation of BMPs. Evidence of the training qualification and

certification of the QSD and QSP must be included. In addition, SWPPPs must address the objective of developing stabilization BMPs for after project-completion. SWPPPs must be available for inspection at the construction site during working hours while construction is occurring, and be made available upon request by a State or Municipal inspector. (Edgecomb 2010)

Municipal Stormwater Permitting Program

The Municipal Stormwater Permitting Program regulates stormwater discharges from municipal separate storm sewer systems (MS4s). MS4 permits were issued in two phases. Under Phase I, which started in 1990, the Regional Water Quality Control Boards have adopted NPDES stormwater permits for medium (serving between 100,000 and 250,000 people) and large (serving more than 250,000 people) municipalities. Most of these permits are issued to a group of co-permittees encompassing an entire metropolitan area. These permits are reissued as the permits expire.

The MS4 permits require the discharger to develop and implement a Stormwater Management Plan/Program with the goal of reducing the discharge of pollutants to the maximum extent practicable (MEP). MEP is the performance standard specified in Section 402(p) of the Clean Water Act. The stormwater management programs specify what best management practices (BMPs) will be used to address certain program areas. The program areas include public education and outreach, illicit discharge detection and elimination, construction and post-construction, and good housekeeping for municipal operations. In general, medium and large municipalities are required to conduct chemical monitoring, while small municipalities are not.

Other General Permits

The SWRCB has adopted several other general permits under the NPDES program, including permits for the discharges of aquatic pesticides for vector and aquatic weed control.

The State Implementation Program (SIP) (State Water Resources Control Board 2000) established new standards for a variety of toxic pollutants. This state policy for water quality control applies to discharges of toxic pollutants into California's inland surface waters, enclosed bays, and estuaries, subject to regulation under the Porter-Cologne Water Quality Control Act and the federal CWA. Such regulation may occur through the issuance of NPDES permits, the issuance or waiver of WDRs, or other regulatory approaches.

The goal of the SIP is to establish a standardized approach for permitting discharges of toxic pollutants to non-ocean surface waters in a manner that promotes statewide consistency. The SIP is a tool to be used in conjunction with watershed management approaches and, where appropriate, the development of TMDLs to ensure that water quality standards are met and the beneficial uses are protected.

California Fish and Game Code Sections 1601–1607

Under Sections 1601–1607 of the California Fish and Game Code, the California Department of Fish and Wildlife (CDFW) regulates projects that affect the flow, channel, or banks of rivers, streams, and lakes. Sections 1601 and 1603 require public agencies and private individuals, respectively, to notify and enter into a streambed or lakebed alteration agreement with CDFW before beginning construction of a project that will have either of the following results:

- Divert, obstruct, or change the natural flow or the bed, channel, or bank of any river, stream, or lake.

- Use materials from a streambed. Section 1601 contains addition prohibitions against the disposal or deposition of debris, waste, or other material containing crumbled, flaked, or ground pavement where it can pass into any river, stream, or lake.

Sections 1601–1607 may apply to any work undertaken within the 100-year floodplain of any body of water or its tributaries, including intermittent stream channels. In general, however, it is construed as applying to work within the active floodplain and/or associated riparian habitat of a wash, stream, or lake that provides benefit to fish and wildlife. Sections 1601–1607 typically do not apply to drainages that lack a defined bed and banks, such as swales, or to very small bodies of water and wetlands such as vernal pools.

Dam Safety and Operation

Dam safety in California is administered by the Department of Water Resources, Division of Safety of Dams (DSOD). DSOD reviews plans and specifications for the construction of new dams or for the enlargement, alteration, repair, or removal of existing dams, as well as performs inspections during dam construction and operation. A water rights permit from the SWRCB is required prior to filing an application to the DSOD to construct a dam.

Local

General Plan

The County's General Plan includes water resource policies in the Land Use Element, Conservation Element, and Agriculture and Open Space Element relating to water quality and water resource management.

San Luis Obispo Integrated Regional Water Management Plan

The San Luis Obispo County Flood Control and Water Conservation District, in cooperation with the Water Resources Advisory Committee (WRAC), has developed an Integrated Regional Water Management Plan (IRWMP) for the region defined as the county boundary. The IRWMP was adopted in 2005 and updated in July 2007 and July 2014. The IRWMP integrates all of the programs, plans, and projects that relate to the region's water supply, water quality, ecosystem preservation and restoration, groundwater monitoring and management, and flood management. One of the IRWMP's water quality objectives is to, "Implement NPDES Phase II Storm Water Management Programs." In March of 2003, Phase II of the NPDES Final Rule went into effect, requiring permits for all construction projects in the county that disturb one acre or more, or if the project is part of a common plan, such as subdivision.

San Luis Obispo Flood Control and Water Conservation District

The San Luis Obispo County Flood Control and Water Conservation District was established in 1945. The district's boundaries are coterminous with the County's. The district is governed by the Board of Supervisors. The district functions similar to a regional water management agency, engaged in water planning and implementation of specific projects and programs. The district holds the County's contract with the State Department of Water Resources for State Water Project service and owns major waterworks facilities such as the Lopez Water Project and the newly constructed Nacimiento Water Pipeline. District water planning is funded by general property tax allocations (sometimes augmented by grant funding), and projects and programs are funded by specific fees/assessments, charges, and/or special taxes when benefiting entities are in specific areas or participate via contracts.

3.14.3 Impacts and Mitigation Measures

Standards of Significance

A hydrologic or water quality impact associated with the implementation of the proposed project would be considered significant if it would result in any of the following actions (based on Appendix G of the CEQA Guidelines):

Water Quality

Violate any water quality standards or waste discharge requirements.

Cause a substantial alteration of the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, in a manner which would result in substantial erosion, siltation, and/or environmental harm on- or off –site.

Create or contribute to runoff water which would provide substantial additional sources of polluted runoff.

Require or result in the construction of new water treatment facilities or expansion of existing facilities, the construction of which could cause significant environmental effects.

Otherwise substantially degrade water quality.

Groundwater Resources

a) Substantially deplete groundwater supplies or interfere substantially with groundwater recharge such that there would be a net deficit in aquifer volume or a lowering of the local groundwater table level (e.g., the production rate of pre-existing nearby wells would drop to a level which would not support existing land uses or planned uses for which permits have been granted).

b) Create future groundwater production impacts to surface water conditions. Would be considered to be substantial if it is demonstrated that groundwater extraction would result in a loss of flow to surface waters (i.e., circumstances where a waterway is currently receiving flows from groundwater discharge) to the extent that it adversely affects existing biological resources (e.g., fisheries and riparian habitat) that are supported by such flows.

c) Drainage and Flooding

Methodology

The analysis herein is focused on the potential water resources impacts associated with implementation of the RTP. It is based on a review of existing data including existing literature, County policies, programs, regulations and other various components, and publicly available documents, including previous EIRs prepared for projects within the county. The analysis recognizes the programmatic nature of the RTP; therefore, it focuses on the potential implications of the proposed policies of the RTP and

not on the individual project-level effects of specific projects. The reader is directed to **Section 5.0, Cumulative Impacts,** of this EIR for analysis of cumulative impacts.

Impacts and Mitigation Measures

This section describes generalized water resources impacts associated with implementation of the RTP.

Deplete Groundwater Supplies or Interfere with Groundwater Recharge

> **Impact W-1:** Construction and maintenance of certain RTP projects could incrementally increase countywide water demand, potentially contributing to insufficient water supplies. Such impacts would be **Class II, significant but mitigable**, impacts.

Implementation of certain RTP projects would result in both short-term and long-term impacts to the county's water supply. During grading activities, water would be needed to suppress fugitive dust generated by construction equipment. It is likely that more than one project could be constructed simultaneously in areas with overdrafted groundwater basins. Most of the RTP improvement projects involve modification of existing facilities. As such, a substantial increase in landscaped areas is not anticipated for these projects. Nevertheless, irrigation of landscaping associated with the RTP projects would require water and therefore contribute to long-term adverse impacts to water supply. Major RTP projects, particularly roadway extension and widening projects and new roadway projects, could affect groundwater supplies by incrementally reducing groundwater recharge potential, due to impermeable surfaces associated with the particular improvements. This, in turn, would increase surface water runoff. While the significance of these impacts cannot be accurately determined in a programmatic analysis, given the overdrafted nature of the majority of the county's groundwater basins, the potential reduction in groundwater recharge and the potential resulting loss of flow to surface waters would be considered a **potentially significant** impact.

2019 RTP Goals, Policies, and/or Strategies that Serve to Reduce Potential Impacts

This EIR incorporates the 2019 RTP's goals, policy objectives, and action strategies as listed in 2019 RTP Chapter 3 which is included in **Volume II, Technical Appendices**. Included action strategies serve to integrate innovative concepts or best management practices for storm water runoff into the construction, reconstruction, or retrofit of streets.

In addition, at the time of specific project-level environmental review, the lead agency shall ensure compliance with the following mitigation measures to reduce impacts to a less than significant level.

Mitigation Measures

MM W-1(a) Ensure that lead agency should encourage the use of reclaimed water for dust suppression during construction activities.

MM W-1(b) Ensure that low-water-use landscaping (i.e., drought-tolerant plants and drip irrigation) is installed.

MM W-1(c) Ensure that landscaping associated with improvements is maintained using reclaimed water to the maximum extent feasible.

MM W-1(d) Encourage that porous pavement materials are utilized to allow for groundwater percolation. Rural bicycle trails shall be left unpaved, where appropriate.

Potential water supply impacts associated with the majority of RTP projects are considered to be temporary or short-term construction and maintenance related (as opposed to a long-term commitment to water such as may occur with population growth). As such, the implementation of the above policies and mitigation measures would reduce potential impacts to construction and maintenance impacts to water and groundwater supply and demand to a **less than significant** level. However, this conclusion is based upon the significance thresholds in effect at the NOP stage, associated with the development of this EIR. New CEQA Guidelines have since been adopted (2018), which contain particular changes to the thresholds for water supply. These thresholds are contained in Amendments to the CEQA Guidelines, Section 15155(f) and should be applied to the project-specific environmental review of RTP projects.

Surface Water and Groundwater Quality

Impact W-2: Construction of, and vehicular operations resulting from certain RTP projects could result in increased erosion and stormwater runoff, which could degrade surface water and groundwater quality. This would be considered **a Class I, significant and unavoidable** impact.

Short-term adverse impacts to surface water quality may also occur during the construction periods of individual improvement projects due to areas of disturbed soils that would be highly susceptible to water erosion and downstream sedimentation. This impact is of particular concern where projects are located on previously contaminated sites or in close proximity to water bodies. Grading and vegetation removal in proximity to creeks for the construction of bridges could result in an increase in erosion and sedimentation of creek banks and could affect both water quality and the stability of slopes along the creeks. Without effective erosion and stormwater control, contaminated soils exposed during construction activities may result in surface water contamination.

Long-term implementation of the RTP would increase impervious surfaces due to new or expanded roadways. Increased traffic volumes on local roadways can impact water quality through discharge of pollutants such as heavy metals from auto emissions, oil, and brake pad materials on roadways, which can be conveyed from roadways through man-made or natural drainage features into receiving water bodies or through permeation of the ground surface into groundwater basins. Much contaminated urban runoff remains largely untreated, thus resulting in the incremental long-term degradation of water quality.

Both short-term and long-term activities and operations could result in increased erosion and stormwater runoff, which could degrade surface water and groundwater quality. The following policies and mitigation measure may reduce this impact. However, depending upon the scale and location of specific RTP projects, in combination with existing projects, the level of impact may remain significant, even after mitigation. Therefore, implementation of RTP projects could be considered a **significant and unavoidable** impact.

2019 RTP Goals, Policies, and/or Strategies that Serve to Reduce Potential Impacts

This EIR incorporates the 2019 RTP's goals, policy objectives, and action strategies as listed in 2019 RTP Chapter 3 which is included in Volume II, Technical Appendices. Included action strategies serve to integrate innovative concepts or best management practices for storm water runoff into the construction, reconstruction, or retrofit of streets.

In addition, at the time of specific project-level environmental review, the lead agency shall ensure compliance with the following mitigation measures, through placement of conditions of approval on applicable projects, to reduce impacts as much as practical:

Mitigation Measures

MM W-2(a): Project sponsors shall prepare and implement, as necessary, a Storm Water Pollution Prevention Plan (SWPPP) in accordance with the policies, requirements, and recommendations of the Countywide Stormwater Program Central Coast Water Board (CCWB). Typical components of a SWPPP would include the following:

- Excavation and grading activities shall be scheduled for the dry season only (April 15 to October 15), to the extent feasible. This will reduce the chance of severe erosion from intense rainfall and surface runoff, as well as the potential for soil saturation in swale areas.
- If excavation occurs during the rainy season, storm runoff from the construction area shall be regulated through a stormwater management/erosion control plan that may include temporary on-site silt traps and/or basins with multiple discharge points to natural drainages and energy dissipaters. Stockpiles of loose material shall be covered and runoff diverted away from exposed soil material. If work is stopped due to rain, a positive grading away from slopes shall be provided to carry the surface runoff to areas where flow can be controlled, such as the temporary silt basins. Sediment basin/traps shall be located and operated to minimize the amount of offsite sediment transport. Any trapped sediment shall be removed from the basin or trap and placed at a suitable location on-site, away from concentrated flows, or removed to an approved disposal site.
- Temporary erosion control measures shall be provided until perennial revegetation or landscaping is established and can minimize discharge of sediment into nearby waterways. For construction within 500 feet of a water body, fiber rolls and/or gravel bags shall be placed upstream adjacent to the water body.
- After completion of grading, erosion protection shall be provided on all cut-and-fill slopes. Revegetation shall be facilitated by mulching, hydroseeding, or other methods and shall be initiated as soon as possible after completion of grading and prior to the onset of the rainy season (by October 15).
- Permanent revegetation/landscaping shall emphasize drought-tolerant perennial ground coverings, shrubs, and trees to improve the probability of slope and soil stabilization without adverse impacts to slope stability due to irrigation infiltration and long-term root development.

- BMPs selected and implemented for the project shall be in place and operational prior to the onset of major earthwork on the site. The construction phase facilities shall be maintained regularly and cleared of accumulated sediment as necessary.
- Hazardous materials such as fuels and solvents used on the construction sites shall be stored in covered containers and protected from rainfall, runoff, and vandalism. A stockpile of spill cleanup materials shall be readily available at all construction sites. Employees shall be trained in spill prevention and cleanup, and individuals should be designated as responsible for prevention and cleanup activities.

SWPPP(s) for projects immediately adjacent to or within drainages would need to incorporate additional erosion control measures in order to avoid adverse effects on water courses. Such measures shall be determined in consultation with the Central Coast Water Board (CCWB).

MM W-2(b): Ensure that adequate drainage infrastructure is in place to accommodate runoff from the project. If adequate drainage infrastructure is not available, the project proponent shall pay utility mitigation fees or otherwise provide improvements to the drainage facilities of the jurisdiction in which the project is located such that drainage facilities affected by the project in question maintain an acceptable level of service.

MM W-2(c): Ensure that if a particular RTP project is located within or adjacent to a stream channel, the placement of any fill will not violate Federal of State water quality standards under Section 401 of the Clean Water Act. In addition, the lead agency must coordinate with the CDFW to identify any projects that would require a Streambed Alteration Agreement under Section 1603 of the Fish and Game Code.

Implementation of the above mitigation measures would reduce potential impacts to surface water and groundwater quality, however; long-term impacts would not be feasible to effectively mitigate and thus, impacts would be **significant and unavoidable**.

Drainage and Flooding

Impact W-3: Some RTP projects could be subject to high flood hazard. Impacts are considered **Class II, significant but mitigable**.

Some RTP road and bikeway projects in low-lying areas may be subject to flood hazard. The effects of flooding could include temporary inundation of a facility that impedes its use or causes long-term damage to the facility; immediate damage to roadways, bikeways, and bridges, typically those adjacent to rising rivers or streams, and particularly during high velocity flood events that wash away or erode facilities; and/or, people or structures could be exposed to flood hazard in the event of dam or levee failure, such as the Whale Rock, Lopez, or Twitchell reservoir dams. Unpaved bikeways are particularly vulnerable, although any facility within the flood zone of a stream would be subject to impacts. Erosion caused by flooding can damage paved facilities, and bridge supports can be undermined or washed away. Indirect impacts of flooding include threats to lives or property, including cars or bicycles parked adjacent to flooded facilities. Lives can be threatened if motorists or cyclists venture onto flooded or flood-damaged facilities. All of these above potential impacts to people and structures are considered **potentially significant**.

At the time of specific project-level environmental review, the lead agency shall ensure compliance with the following mitigation measures, through placement of conditions of approval on applicable projects, to reduce impacts to a **less than significant level**.

2019 RTP Goals, Policies, and/or Strategies that Serve to Reduce Potential Impacts
None.

Mitigation Measures

MM W-3: If a particular RTP project is located in an area with high flooding potential, the lead agency shall ensure that the facility is designed to withstand a 100-year flood event, that feasible bank stabilization and erosion control measures are implemented along creek crossings, and that other measures are implemented as appropriate.

Implementation of the above mitigation measure would reduce potential flood-related impacts to a **less than significant** level.

Tsunami/Seiche/Mudflow

Impact W-4: Implementation of certain RTP projects may be located in areas subject to tsunami or seiche. This is considered a **Class II, significant but mitigable**, impact.

The potential for impacts due to tsunami and seiche are considered low throughout the county. Coastal regions would be most susceptible to tsunami, while areas adjacent to large lakes are subject to seiche. No lakes large enough to produce substantial seiche events are located in the county. Although impacts related to tsunami are considered unlikely, they are **potentially significant** without mitigation.

At the time of specific project-level environmental review, the lead agency shall ensure compliance with the following mitigation measures, through placement of conditions of approval on applicable projects, to reduce impacts to a **less than significant level**.

2019 RTP Goals, Policies, and/or Strategies that Serve to Reduce Potential Impacts
None.

Mitigation Measures

MM W-4: If a particular RTP project is located in an area subject to tsunami effects, the lead agency shall evaluate tsunami inundation risks and incorporate features designed to minimize damage from a tsunami, such as:

Specifying final roadbed elevations greater than the expected height of a tsunami with a given return frequency. In addition, the lead agency shall ensure that early warning and evacuation plans for tsunami events are developed and implemented.

Placing structures either at elevations above those likely to be adversely affected during a tsunami event, or designed to allow swift water to flow around, though, or underneath without causing collapse.

Using structures as buffer zones, providing front-line defenses, and securing foundations of expendable structures so as not to add to debris.

Implementation of the above mitigation measure would reduce potential impacts related to tsunami and seiche to a **less than significant** level.

This conclusion is assuming feasibility of aforementioned measures, which is expected to be analyzed at the project/site-specific CEQA and/or NEPA environmental review phase.

3.15 AGRICULTURAL RESOURCES

This section of the EIR describes agricultural resources in the county. The agricultural resources setting is primarily based on applicable information provided by the County's 2010 Conservation and Open Space Element (COSE),(SLO County 2010a), the SLOCOG 2010 RTP EIR (SLOCOG 2010), and previous EIRs prepared for projects in San Luis Obispo County.

3.15.1 Existing Setting

Fertile soils and groundwater resources, combined with moderate climate, form the essential ingredients for agriculture. San Luis Obispo County possesses unique, diverse, and valuable agricultural resources from irrigated croplands in the Arroyo Grande and Cienega valleys, wines from vineyards in Edna Valley and the Paso Robles area, orchards in the Nipomo Valley, dry land farming of the North County, and cattle grazing lands throughout the coastal hills and interior valleys. San Luis Obispo County considers agricultural lands as those designated or zoned for agriculture use as well as other lands being used for production agriculture.

Agriculture makes a substantial contribution to the county's economy and accounts for approximately 80 percent of the privately owned land in the county. The top five crops by value in San Luis Obispo County include wine grapes, broccoli, strawberries, cattle, and vegetable transplants. The county has become an increasingly important winemaking region, and the trend of the 1990s to convert ranchlands to vineyards continues (SLO County 2009c).

The amount of farmland designated "locally important" has been steadily declining. This is a local government designation, defined simply the same as prime farmland, except that it is not irrigated. The sharpest decline was between 2012 and 2014, losing roughly 15,100 acres. A good amount of this farmland was converted to the prime category with the addition of irrigation, mostly to support wine grape primarily production. Still other farmlands, about 9,000 acres, were converted to grazing. Also significant, there is an increasingly amount of land being converted to urban uses.

Agricultural Preserves (Williamson/Land Conservation Act)

The County's agricultural preserve program was created to implement the California Land Conservation Act of 1965, also known as the Williamson Act. Passed by the California Legislature more than 40 years ago, the program was designed to protect agricultural and open space lands from urban development. In order to preserve these uses, the act established an agricultural preserve contract procedure (Williamson Act contract) by which any county or city in the state taxes landowners at a lower rate, using a scale based on the actual use of the land for agricultural purposes as opposed to its unrestricted market value. In return, the owners guarantee that these properties will remain under agricultural production for a ten-year period. The contract is renewed automatically on an annual basis unless the owner files a notice of nonrenewal.

San Luis Obispo County currently contains 90,855 acres of prime agriculture land and 692,091 acres of non-prime agriculture land under the land conservation act under Williamson Act contract as of 2015

(the most recent year for which data is available) (DOC 2016a). In 2014, prime and non-prime agriculture lands were 89,279 acres and 694,368. This is a net increase in prime agriculture land of over 1,500 acres and a net increase of over 2,000 acres in non-prime agriculture lands. The county was ranked as number 14 in 2014 and number 4 in 2015 for counties with the greatest amount of new enrollments (based on acres). The county was ranked as number 11 in 2014 and number 8 in 2015 for counties with the greatest amount of nonrenewal expirations (based on acres).

The Farmland Mapping and Monitoring Program 2016 Field Report (DOC 2016b) identified two unusual changes. Conversions from Farmland of Local Importance to Grazing Land: These conversions were primarily due to fields of non-irrigated grain having been fallow for four or more update cycles. There were 41conversions. Most of the changes in this category occurred on the Simmler quad where approximately 370 acres were converted to Grazing Land. This was followed by the Paso Robles and Templeton quads with both quads exhibiting approximately 170 acres of conversion to Grazing Land. Conversion from Grazing Land to Farmland of Local Importance: These conversions were primarily due to areas which were Grazing Land and are now being used for the cultivation of non-irrigated grain crops. There were 54 conversions. Most of the changes in this category occurred on the Chimineas Ranch quad where approximately 600 acres were converted to Farmland of Local Importance. This was followed by the Holland Canyon and Nipomo quads with both quads exhibiting approximately 340 acres of conversion to Farmland of Local Importance.

3.15.2 Regulatory Framework

State Williamson Act

The California Land Conservation Act, otherwise known as the Williamson Act, was enacted by the State Legislature in 1965 as a means of preserving California's prime agricultural lands from urbanization. Prime farmland under the Williamson Act includes land that qualifies as Class I and II under the NRCS classification of land. The Williamson Act involves voluntary contracts between landowners and a city or county in which the owners agree to retain their lands in agriculture or other open space uses for a minimum of ten years. In return for entering into this contract, the landowners receive property tax relief on the lands under contract.

Farmland Mapping and Monitoring Program

The Farmland Mapping and Monitoring Program (FMMP) was established in 1982 by the California Department of Conservation (DOC) to continue the Important Farmland mapping efforts begun in 1975 by the NRCS. The intent of the NRCS was to produce agricultural resource maps based on soil quality and land use across the nation.

Regional

San Luis Obispo Local Agency Formation Commission (LAFCo) and the Cortese-Knox-Hertzberg Local Government Reorganization Acts

The Cortese-Knox-Hertzberg Local Government Reorganization Acts of 1985 and 2000 govern the incorporation of new cities and boundaries. The act gives authority to the Local Agency Formation Commission (LAFCo) in each county to consider proposals for incorporation and annexations. The act also established five criteria for determining the quality of agricultural lands. Land is defined as prime agricultural land if it meets any of the listed criteria (Section 56064).

Local

San Luis Obispo County General Plan Agriculture Element

The Agriculture Element originated from a comprehensive update of the County's 1972 Open Space Element. The update was adopted in 1998 and was retitled the Agriculture and Open Space Element in order to more accurately reflect concerns for both the agriculture and open space areas of the county. The update and adoption of the Conservation and Open Space Element in 2010 resulted in the separation of the Agriculture and Open Space Elements.

San Luis Obispo County Zoning Code

The County's Zoning Code has an Agriculture (AG) Zone district, outlined in Chapter 17.33. The AG zone is intended to encourage conservation of agricultural lands and continuation of agricultural uses and the keeping of livestock where compatible with urban development. The AG zone will be applied to areas designated on the general plan map as "conservation open space" and "interim open space" where there has been a history of agricultural cultivation and keeping of livestock. The AG district has its own development standards that implement the above purpose.

City General Plans and Zoning Codes

The seven incorporated cities (Arroyo Grande, Atascadero, Grover Beach, Morro Bay, Paso Robles, Pismo Beach, and San Luis Obispo) in San Luis Obispo County are not subject to the policies and regulations set out by the County's General Plan. The incorporated areas' respective general plans and ordinances, which are tailored to agricultural resource issues within their planning areas, regulate lands in these jurisdictions.

3.15.3 Impacts and Mitigation

Measures

Standards of Significance

An agricultural or forestry impact is considered significant if implementation of the project would result in any of the following (based on State CEQA Guidelines Appendix G):

a) Convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland), as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to nonagricultural use.

b) Conflict with existing zoning for agricultural use, or a Williamson Act contract.

c) Conflict with existing zoning for, or cause rezoning of, forest land (as defined in Public Resources Code section 12220(g)), timberland (as defined by Public Resources Code Section 4526), or timberland zoned Timberland Production (as defined by Government Code Section 51104(g)).

d) Result in the loss of forest land or conversion of forest land to non-forest use.

e) Involve other changes in the existing environment which, due to their location or nature, could result in conversion of farmland to nonagricultural use or conversion of forest land to non-forest use.

Methodology

The analysis herein is focused on the potential agriculture and forestry impacts associated with implementation of the RTP. The analysis recognizes the programmatic nature of the RTP and, therefore, it focuses on the potential implications of the proposed policies of the RTP, not on the individual project-level effects of specific projects. The reader is directed to **Section 5.0, Cumulative Impacts,** of this EIR for analysis of cumulative impacts.

Impacts and Mitigation Measures

This section describes generalized agriculture and forestry impacts associated with implementation of the projects listed in the RTP. There are no timberlands within the county; therefore implementation of the RTP would have **no impact** and there is no further discussion on timberlands herein.

Agricultural and Forest Land Impacts

> **Impact AG-1:** There is a possibility, although limited, that RTP projects would encroach upon agricultural and forest lands. Although the actual level of impact from individual projects cannot be not known at this time, this evaluation assumes that some direct or indirect encroachment or conversion of agricultural and forest lands would occur. Therefore, assuming worse case, the RTP would result in a **Class I, significant and unavoidable***,* impact.

The extension and widening of roadways under the RTP may encroach into areas supporting agricultural production and/or areas with forest lands, resulting in a **potentially significant** impact. Most projects would only affect narrow strips along existing rights-of-way. Nevertheless, an incremental loss of lands could occur in association with roadway improvements. Loss of lands could occur in the unincorporated portions of the county and the rural areas of the cities of Atascadero, Paso Robles, Arroyo Grande, Grover Beach, and San Luis Obispo. Direct impacts could occur by displacing agricultural production or converting forest land.

Much of the North County Subregion, in the Edna Valley in the Central County Subregion, and the western portion (including Nipomo Mesa) of the South County Subregion are underlain by prime agricultural soils, Farmland of Statewide Importance, or Unique Farmland as identified by the State Farmland Mapping and Monitoring Program (FMMP) and State Soil Geographic (STATSGO) Database. RTP projects, such as roadway widenings, extensions, and realignments throughout the county could encroach on prime agricultural soils or soils that could support high-quality agricultural production or forest lands.

While a large majority of lands in the county are based on agricultural use, there are lands, mostly located in the Central County and South County subregions, which are considered forest lands. Some of these lands are held in reserve according to the California Department of Forestry and Fire Protection (Cal Fire) (Cal Fire 2003a). These lands are permanently protected from conversion. However, there are forest lands that

are not in reserve but are considered working lands, which are lands held or managed for some degree of commodity output, usually range or forested lands. These forest lands could potentially be impacted by RTP projects.

Action strategies included in the RTP's Sustainable Communities Strategy (SCS) component include the "protection of important farmland, valuable habitats, and natural resources." These strategies are included to help guide the transportation system decision-making process. However, without knowing the design and construction details of each project at this time, at a programmatic level it must be assumed that the potential for significant impact exists. With the limited knowledge of the individual impacts at a programmatic level of review, no mitigation measures are available to mitigate the potential loss of agricultural land and/or forest lands short of eliminating or realigning roadways that would traverse those areas. However, compliance with the following RTP policies would reduce project impacts related to agricultural lands and/or forest lands to the greatest extent feasible.

2019 RTP Goals, Policies, and/or Strategies that Serve to Reduce Potential Impacts

This EIR incorporates the 2019 RTP's goals, policy objectives, and action strategies as listed in 2019 RTP Chapter 3 which is included in **Volume II, Technical Appendices**. Included policy objectives and action strategies serve to: Protect important farmland, valuable habitats, and natural resources, conserve and protect natural and sensitive resources.

In addition, at the time of specific project-level environmental review, the lead agency shall ensure compliance with the following mitigation measures, through placement of conditions of approval on applicable projects, to reduce impacts.

Mitigation Measures

MM AG-1(a): When new roadway extensions are planned, the lead agency of a particular RTP project shall ensure that during project development feasible alternative alignments that reduce or avoid impacts to agricultural/ forest lands are considered.

MM AG-1(b): The lead agency of a particular RTP project shall ensure that rural roadway alignments follow property lines, to the extent feasible.

Impacts from individual projects will need to be addressed on a case-by-case basis; however, because impacts to individual agricultural properties cannot be assumed to be insignificant, agricultural impacts are considered **significant and unavoidable**.

4.0 ALTERNATIVES

4.1 General CEQA Requirements

California Environmental Quality Act (CEQA) Guidelines Section 15126.6(a) requires that a reasonable range of alternatives to the proposed project be described and considered in an environmental impact report (EIR). The alternatives considered should represent scenarios that could feasibly attain most of the basic objectives of the proposed project, but will avoid or substantially lessen any of the significant environmental effects. The feasibility of an alternative may be determined based on a variety of factors including, but not limited to, site suitability, economic viability, availability of infrastructure, general plan consistency, other plans or regulatory limitations, jurisdictional boundaries, and site accessibility and control (CEQA Guidelines, Section 15126.6(f)(1)).

The purpose of this process is to provide decision makers and the public with a discussion of viable development options and to document that other options to the proposal were considered in the application process (CEQA Guidelines, Section 15126.6).

CEQA requires that the lead agency adopt mitigation measures or alternatives, where feasible, to substantially lessen or avoid significant environmental impacts that would otherwise occur. Where a lead agency has determined that even after the adoption of all feasible mitigation measures, a project as proposed will still cause significant environmental effects that cannot be substantially lessened or avoided, the agency, prior to approving the project as mitigated, must first determine whether, with respect to such impacts, there remain any project alternatives that are both environmentally superior and feasible within the meaning of CEQA.

CEQA provides the following guidelines for discussing project alternatives:

- An EIR need not consider every conceivable alternative to a project. Rather, it must consider a reasonable range of potentially feasible alternatives that will foster informed decision-making and public participation (Section 15126.6(a)).
- An EIR is not required to consider alternatives which are infeasible (Section 15126.6(a)).
- The discussion of alternatives shall focus on alternatives to the project or its location which are capable of avoiding or substantially lessening any significant effects of the project (Section 15126.6(b)).
- The range of potential alternatives to the proposed project shall include those that could feasibly accomplish most of the basic objectives of the project and could avoid or substantially lessen one or more of the significant effects (Section 15126.6(c)).
- The EIR should briefly describe the rationale for selecting the alternatives to be discussed (Section 15126.6(c)).
- The EIR shall include sufficient information about each alternative to allow meaningful evaluation, analysis and comparison with the proposed project (Section 15126.6(d)).

The CEQA Guidelines, Section 15126.6(e) require that the No Project Alternative and its impacts be evaluated. The "no project" analysis shall "discuss the existing conditions, as well as what would be reasonably expected to occur in the foreseeable future if the project were not approved, based on

current plans and consistent with available infrastructure and community services." The EIR must also identify the environmentally superior alternative. If the environmentally superior alternative is the No Project Alternative, then CEQA requires that the EIR also identify an environmentally superior alternative from among the other alternatives (CEQA Guidelines**,** Section 15126.6(e)(2)).

4.2 Relationship to Project Objectives

Project objectives are used as the basis for comparing project alternatives and determining the extent that the objectives would be achieved relative to the project. The reader is referred **Chapter 2.0, Project Description,** where the RTP objectives were previously discussed.

4.3 Alternatives Considered But Not Selected for Analysis

CEQA Guidelines Section 15126.6(c) states that an EIR should identify any alternatives that were considered by the lead agency but were rejected as infeasible and briefly explain the reasons underlying the lead agency's determination. Additional information explaining the choice of alternatives may be included in the administrative record. Among the factors that may be used to eliminate alternatives from detailed consideration in an EIR is failure to meet most of the basic project objectives, infeasibility, or inability to avoid significant environmental impacts.

LARGE LOTS ALTERNATIVE (Scenario 1)
Future Year 2035 80/20 - Continues large lot housing; does 80% Large Lot/20% Compact Housing Continues Large Lot Scenario, therefore; does not meet project objectives

This scenario follows the 2050 Regional Growth Forecast for population, housing, and employment distribution and uses a balanced intermodal investment approach. However, of the expected new housing, 80 percent of new housing is large-lot and 20 percent is compact housing. This scenario falls significantly short of the goal of RTP's goal of providing a higher ratio of compact development and, therefore, would not meet the Plan's GHG reduction targets. Consequently, this alternative was not carried forward for further analysis.

COMPACT HOUSING ALTERNATIVE (Scenario 2)
Future Year 2035 30/70 Compact Housing Emphasis - 30% Large Lot/70% Compact Housing Emphasis ACHIEVES COMPACT HOUSING OBJECTIVE; Ignores jobs/housing imbalance; does not meet project objectives

This Scenario is most similar to the 2014 RTP/SCS. It follows the 2050 Regional Growth Forecast for population, housing, and employment distribution, directs growth toward existing communities, and uses a balanced intermodal investment approach. Of the expected new housing, 30 percent of new housing is large-lot and 70 percent is compact housing. This alternative does not address the Jobs/Housing Imbalance. Consequently, it would not achieve one of the RTP's principal project objectives, which is reducing vehicle miles traveled.

Project Alternatives Analyzed

As required by Section 15126(d) of the State CEQA Guidelines, this EIR examines a range of reasonable alternatives to the proposed project that could feasibly achieve similar objectives. Since the primary

objective of the RTP is to guide short- and long-range transportation improvements countywide, a discussion of alternative sites is not appropriate. Instead, the analysis of alternatives focuses on the inclusion or exclusion of groups of projects envisioned under the RTP. Three alternatives to the implementation of the entire RTP were evaluated, as follows:

- Alternative 1 – "NO PROJECT ALTERNATIVE" – Projects in the "Pipeline"
- Alternative 2 "MAX COMPACT HOUSING ALTERNATIVE" (RTP Scenario 4 - Future Year 2035 20/80) – distributing 20% to Large Lot/80% to Compact Housing and using a jobs-housing balance emphasis.
  Issue: Limited feasibility, Potentially increases VMT
- Alternative 3 – "ROAD LESS TRAVELED ALTERNATIVE" (RTP Scenario 3 – Future Year 2035 and 2045 30/70) - distributing 30% to Large Lot/70% to Compact Housing and using a jobs-housing balance emphasis. Same as Proposed Project (Scenario 3), But Eliminates Roadway Improvement Projects.
  Issue: Fails to meet key project objectives

Each alternative is described in detail in the following discussion. As the purpose of the alternatives analysis under CEQA Section 15126.6(b) is to identify alternatives that will avoid or substantially lessen any of the significant environmental effects associated with the proposed project, the discussion is limited to the environmental issue areas where proposed project impacts were found to be significant. The proposed project was found to have significant impacts in three issue areas: aesthetics, biological resources, and noise.

Alternative 1 – No Project Alternative

This alternative assumes status quo, plus approved and funded multi-modal projects in the "Pipeline". No improvements would be implemented beyond existing projects that are in the advanced planning stages and are slated to go forward since they have full funding commitments.

Description

This alternative, as required by CEQA, analyzes whether environmental impacts associated with implementation of the 2019 RTP would be reduced if planned improvements to the future transportation system were not made; that is, if improvements are not implemented beyond existing projects that are in the advanced planning stages and are slated to go forward since they have full funding commitments. This alternative would, however, consider projected (year 2035) growth and development. Since this alternative includes projects in the pipeline, it is not equivalent to existing conditions, or to continuation of the existing plan.

As such, it assumes some of these "pipeline" projects ultimately moving forward. Therefore, the No Project Alternative does not necessarily eliminate the significant unavoidable impacts associated with the proposed project, however; it may only lessen their severity.

Impact Analysis

Aesthetics/Visual Resources

The proposed project's impact to the degradation of visual character (Impact AES-2) related to a potential increase in light and glare, although limited, is considered potentially significant and unavoidable. In the absence of any new transportation system improvement projects in the region, with the exception of those which have already been funded and/or are in the advanced planning stages (i.e.; in the "pipeline"), the existing visual character of areas which might otherwise be affected by construction associated with such improvements would be maintained. Under the No Project Alternative, the potential for a substantial increase in existing levels of light and glare would be reduced. Consequently, the No Project Alternative would result in less intense impacts to aesthetics and visual resources than the proposed project.

Biological Resources

The potential to alter natural habitats and effects on sensitive species (Impact B-2) would be reduced to an insignificant level under this alternative. Assuming limited construction under this Alternative, there would be no potentially significant effects on habitats, riparian areas/wetlands, or wildlife migration corridors. There would be no risk of conflict with local policies or ordinances intended to protect biological resources or with any habitat conservation plans. Consequently, the No Project Alternative would result in better (or less intense) impacts to biological resources than the proposed project.

Land Use

This alternative would not fulfill SLOCOG's proposed RTP's transportation goals and objectives, specifically related to enhancing *multimodal transportation choices,* limiting *automobile oriented development, and* promoting *pedestrian scale communities.* It would further fail to meet existing RTP goal of providing facilities which *accommodate multiple transportation modes (i.e., multimodal), including pedestrians, bicycles, car/vanpoolers, and public transit.* It would also conflict with the general plan goals and objectives of the County of San Luis Obispo, and the various cities in the county. (Land Use was not identified as a Significant, Unavoidable impact or the proposed project, however; it is addressed here because of the relation to this alternative).

Noise

The project's impact to sensitive receptors affected by long-term operational noise exposure (Impact N-2) is considered potentially significant and unavoidable. Consequently, the No Project Alternative would result in better (or less intense) impacts to noise than the proposed project. Traffic noise, on the other hand, may be more intense under the No Project Alternative since there would continue to be increases in traffic and congestion, versus lower impacting travel modes such as walking and biking. The degree to which RTP multimodal and ATP benefits might offset other project-related noise impacts is uncertain, given the programmatic nature of this analysis.

Alternative 2 - "MAX COMPACT HOUSING ALTERNATIVE" (RTP Scenario 4)

This Future Year 2035 scenario assumes a moderate level of growth outlined in the 2050 Regional Growth Forecast distributed to improve the jobs/housing imbalance. New residential units were distributed based on 20% Large Lot and 80% Compact Housing, using a more aggressive approach toward compact housing than the proposed Project, which assumes 30% and 70%, respectively, along with a balanced intermodal investment approach.

This alternative incorporates, both, Compact Housing Type and Jobs/Housing Imbalance, as with the proposed project (Scenario 3), but incorporates a more aggressive compact housing goal of 80 percent. The intent of this alternative is to achieve greater reductions in VMT through increasing the ratio of compact housing, as compared to the proposed project. However, it is questionable whether this higher level of compact housing could be achieved in proximity to the county's major employment center – that is, in and around the City of San Luis Obispo.

The City of San Luis Obispo has been adding additional housing in order to accommodate increasing housing demand and much of this has consisted of higher density (compact housing), more affordable units. However, there is a limit to the City's current capacity to absorb development beyond their population growth projections. Consequently, other areas would need to absorb additional residents. This could, in turn, generate longer commutes, resulting in higher VMT than the proposed Project.

Additional funding (above financial constraint) would be necessary to expand regional transit services to offset added VMT. Additionally, for transit to be feasible, riders need to be within a reasonable distance from a transit stop. The general rule is ¼ mile if walking. If driving, this could be extended several miles, however a driver may decide it is more convenient to continue on their journey in their personal vehicle. Also, park-and-ride lots are necessary if driving to connect with transit services. This raises the questions regarding feasibility in areas are characterized by predominantly large-lot, dispersed, housing pattern.

The net result under this alternative is greater VMT impacts because it disperses housing to areas that can accommodate the additional compact housing (10%) in areas that are not also beneficial to improving jobs-housing balance. Consequently, commuters in these other areas would have to travel longer distances to reach transit services, jobs, and shopping opportunities which, in essence, would actually increase VMT. In fact, most commuters would be discouraged from driving to transit terminals, unless they are relatively close by. Combining biking with transit increases the feasibility, particularly with the advent of electric bikes and scooters. However, this is likely more feasible in urban settings, or where there are dedicated bike corridors in the more remote rural and exurban communities.

This Alternative, (similar to Alternative 3) also distributes new employment growth to coincide more closely with areas of the county which have a significant jobs/housing imbalance Consequently, this alternative does not result in any greater GHG reduction benefits, as compared to the proposed project. Otherwise, significant unmitigated impacts would be generally the same (i.e., Aesthetics/Glare, Biology/Sensitive Species, and Noise) as with the proposed RTP

Alternative 3 – "Road Less Traveled Alternative "

This alternative is the same as the Proposed Project (Scenario 3) with elimination of the Roadway Improvement Projects. The intent of this alternative is to reduce the environmental impact of the 2019 RTP by eliminating all projects resulting in significant and unavoidable impacts. This includes construction and operational activities, primarily resulting from implementation of road construction and widening projects, park-and-ride lots, and other physical developments, such as bike and pedestrian paths.

This alternative could also exacerbate existing and future adverse traffic conditions, which the RTP would otherwise remedy, such as related to traffic congestion, increased VMT, hazardous traffic conflicts at intersections, as well as pedestrian and bike access and safety. Alternative 3 would also compromise RTP

initiatives to expand transit and alternative mode facilities associated with roadway improvements, such as through eliminating new and expanded park-and-ride facilities. This alternative could as well impose barriers to reconfiguring existing streetscapes designed to encourage alternative modes and facilitate transit. While some noise impacts associated with construction and operation of transit facilities would be avoided under this alternative, other noise sources associated with increased traffic under Alternative 3 could be increased. A discussion of specific impacts that would be avoided follows:

Impact Analysis

Aesthetics/Visual Resources

The proposed project's impact to the degradation of visual character (Impact AES-2) is considered potentially significant and unavoidable. This impact would not occur under Alternative 3. However, Alternative 3 may negate environmental benefits related to community character, which could accrue from improved streetscapes (i.e.; complete streets, placemaking, traffic calming, etc.), enhancing traffic safety, and relieving congestion through implementation of transit and alternative modes projects.

Biological Resources

The proposed project's impact to the modification of natural habitats and effects on sensitive species (Impact B-2) is considered potentially significant and unavoidable. This represents a worst case scenario, since specific sites have not yet been identified for RTP projects. This alternative would avoid the potentially significant, unavoidable impacts associated with the proposed project.

Land Use

Land Use was not identified as a significant, unavoidable impact resulting from implementation of the proposed Project. However, this topic is being included because of the implications and tradeoffs associated with Alternative 3. Elimination of certain roadway projects could make more funding available for alternative transportation projects. However, at least some road improvements are designed to improve transit and alternative modes. Alternative 3 could, however, result in conflicts with existing plans and policies intended to support a multimodal landscape. Considering that some of the improvements under the RTP are intended to respond to safety issues, and expand bike/ped access, indiscriminate elimination of all road-related projects would certainly undermine the plans guiding multimodal actions. On the other hand, there would be some benefit to land use associated with Alternative 3 as it could provide greater, more sustainable use of resources.

Noise

The project's impact to sensitive receptors affected by long-term operational noise exposure (Impact N-2) is considered potentially significant and unavoidable. impacts surrounding potential alternative transportation facilities, located in more populated areas where there are more sensitive receptors are more common. Additionally, many of these transportation facilities (trails, pedestrian corridors, bikeways, etc.) have inherently less noise impacts than roadways because they do not involve motorized vehicles. Nevertheless, It is expected that the overall impact to sensitive receptors under Alternative 3 would either be reduced or eliminated.

4.4 Environmentally Superior Alternative

CEQA Guidelines Section 15126(d) (2) states that if the environmentally superior alternative is the no project alternative, the EIR shall also identify an environmentally superior alternative from among the

other alternatives. In this evaluation is was determined that the no project was not the environmentally superior alternative due to a number of factors including the loss of federal funding, deterioration of resources, and worsening traffic and circulation.

Figure 4.4-1 summarizes the findings of the evaluation contained in this chapter (limited to the environmental issue areas where proposed project impacts were found to be significant and unavoidable). For each environmental issue area, the table summarizes whether the alternative is environmentally inferior, similar, or superior to the proposed project.

Figure 4.4-1: Comparison of Alternatives to Proposed Project - Significant, Unavoidable Environmental Impacts

Environmental Impacts	Alternative 1 (No Project)	Alternative 2	Alternative 3*
Aesthetics/Visual Resources	Neutral/Uncertain (+)	Neutral (0)	Superior (+)
Biological Resources	Neutral/Uncertain (+)	Neutral (0)	Superior (+)
Noise	Neutral/Uncertain (+)	Neutral (0)	Superior (+)

Figure 4.4-1(B): Comparison of Alternatives to Proposed Project – Environmental, Policy, and Feasibility Considerations

Environmental Issue Area	Alternative 1 (No Project)	Alternative 2	Alternative 3*
SCS/GHG Reduction Target, Air Quality Benefits	Inferior (-)	Neutral (-)	Similar (0)
General Plans/Zoning Consistency/ Feasibility Issues	Inferior (-)	Inferior (-)	Inferior (–)
Mobility/Multimodal Transportation	Inferior (+)	Inferior (0)	Inferior (–)

Alternatives 1 might avoid potentially significant, unavoidable impacts to Aesthetics/Visual Resources, Biological Resources, and Noise. However, this alternative might possibly result in similar impacts as well, given that projects in the pipeline would likely have adverse impacts, depending upon various site-specific issues, the nature of which cannot be determined until the site/project-specific project phase. Alternative 3 would then be more likely to reduce identified significant impacts and, therefore, be deemed the environmentally superior alternative to the proposed project. However, the proposed project would result in a number of environmental benefits, which may outweigh the significant impacts that were identified. Moreover, the proposed Project advances a number of land use and environmental policy goals, in contrast to the Alternatives. Therefore, while Alternative 3 may reduce identified impacts, it could result in potentially significant impacts associated with land use related policy conflicts. Alternatives 1 and 3 would also not realize the beneficial impacts to transportation that would occur with the proposed project.

Alternatives 1 and 2, as well as Alternative 3, to a somewhat lesser degree, are anticipated to require modifications to community plans and practices for implementation. This could introduce policy and planning consistency conflicts, which in turn, could impair the feasibility of these alternatives.

The determination as to which of the alternatives is superior depends upon the relative importance placed on the various issue areas. The principal objectives that drive the RTP are, promoting a multimodal transportation system and meeting SCS GHG reduction targets. None of the alternative scenarios would achieve these objectives to the degree that the proposed RTP would and each would result in greater impacts related to transportation and land-use. Additionally, the proposed RTP best responds to the need to reduce, on a per-capita basis, the long-term global and regional impacts of climate change. Based upon this broader perspective, the proposed project could be considered the environmentally superior project overall. Moreover, it appears superior from a policy standpoint insofar as the proposed project advances countywide multimodal transportation and sustainable communities strategy goals.

5.0 CUMULATIVE IMPACTS

This section of the environmental impact report (EIR) identifies the cumulative impacts associated with the proposed project as required by CEQA. The following section considers the impacts of each of the relevant environmental areas analyzed in **Sections 3.1** through **3.15** of this EIR.

5.1 Cumulative Analysis Requirements

CEQA requires that an EIR contain an assessment of the cumulative impacts that could be associated with the proposed project. According to State CEQA Guidelines Section 15130(a), "an EIR shall discuss cumulative impacts of a project when the project's incremental effect is cumulatively considerable." "Cumulatively considerable" means that the incremental effects of an individual project are considerable when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probable future projects (as defined by Section 15130). Per State CEQA Guidelines Section 15355, a cumulative impact consists of an impact that is created as a result of the combination of the project evaluated in the EIR together with other projects causing related impacts. A cumulative impact occurs from "the change in the environment which results from the incremental impact of the project when added to other closely related past, present, and reasonably foreseeable future projects. Cumulative impacts can result from individually minor but collectively significant projects taking place over a period of time."

In addition, Section 15130(b) identifies that the following elements are necessary for an adequate cumulative analysis:

1) Either:
   (A) A list of past, present, and probable future projects producing related or cumulative impacts, including, if necessary, those projects outside the control of the agency; or

   (B) A summary of projections contained in an adopted general plan or related planning document, or in a prior environmental document which has been adopted or certified, which described or evaluated regional or area wide conditions contributing to the cumulative impact. Any such planning document shall be referenced and made available to the public at a location specified by the lead agency.

2) A definition of the geographic scope of the area affected by the cumulative effect and a reasonable explanation for the geographic limitation used.

3) A summary of the expected environmental effects to be produced by those projects with specific reference to additional information stating where that information is available.

4) A reasonable analysis of the cumulative impacts of the relevant projects. An EIR shall examine reasonable, feasible options for mitigating or avoiding the project's contribution to any significant cumulative effects.

Where a lead agency is examining a project with an incremental effect that is not cumulatively considerable, the agency need not consider that effect significant, but must briefly describe its basis for concluding that the incremental effect is not cumulatively considerable.

5.2 Cumulative Approach and Setting

The RTP is a regional document and the impact analysis (**Section 3.0, Impact Analysis)**, undertaken already covers direct and indirect impacts and this analysis region-wide. Therefore, the RTP already addresses issues from a cumulative standpoint. For example, the EIR looks at traffic issues that reflect overall growth projections within and outside of San Luis Obispo County through 2045, which is, in turn, a result of long-term, cumulative land use planning from local governments. Nevertheless, the question remains whether the proposed project's incremental effects are significant enough to constitute a significant, or "considerable" cumulative impact. For example, some impacts, although significant at the project-, or site-level, do not necessarily rise to the level of a considerable cumulative impact.
The RTP is a county-wide transportation plan that accommodates planned growth in San Luis Obispo County by providing a transportation system that maximizes mobility through 2045. The forecast and planned growth is a combination of the general plans and policies for the incorporated cities and unincorporated county areas. However, the setting also recognizes that neighboring counties, particularly Monterey, Kern, Ventura, and Santa Barbara counties, may factor into some of the cumulative impacts toward which the proposed RTP would contribute. These include, for example, air quality, biological, climate change, agricultural, and water impacts.

5.3 Cumulative Impacts Analysis

Identified below is a compilation of the cumulative impacts that would result from the implementation of the RTP and future development in the region. As described above, cumulative impacts are two or more affects that, when combined, are considerable or compound other environmental effects. Each cumulative impact is determined to have one of the following levels of significance: Class I, cumulatively considerable and unavoidable; Class II, cumulatively considerable and mitigable; or Class III, less than cumulatively considerable.

5.3.1 Aesthetics/Visual Resources

The cumulative setting for aesthetics/visual resources consists of the proposed, approved, and conceptual development anticipated within San Luis Obispo County. Implementation of the RTP might result in significant project-level impacts, however; these projects would involve limited road widening improvements and these would take place in existing urban areas. Likewise, the contemplated new or expanded park-and-ride lots would be sited in developed areas. The majority of remaining improvements and programs, such as expansion of transit and rideshare programs, requiring bike parking areas, and promoting walkable communities, would generally enhance the sense of place (i.e.; placemaking) and reinforce community identity. Therefore, on balance, the proposed RTP would not significantly contribute to a significant impact on aesthetic/visual resources. There would, further, be limited potential to cumulatively degrade the county's visual resources such as views to scenic vistas and scenic highways, lighting associated with these projects would not significantly contribute to glare, nor would the RTP be expected to degrade the general visual character of the region. The overall visual effect of such projects would not contribute to an incremental transformation in visual character from rural to more urban or suburban. On the contrary, through supporting mixed-use and in-fill development, coupled with more compact housing, would discourage encroachment of development into rural areas and greenfields (i.e., undeveloped land not previously used for residential or other

urban-type uses). Therefore, even though mitigation is provided for this impact, when considered in the context of the greater San Luis Obispo county area, implementation of the proposed RTP would not result in a considerable cumulative impact.

This is considered a **Class III, less than cumulatively considerable** impact.

5.3.2 Air Quality

The cumulative setting for air quality is the South Central Coast Air Basin (SCCAB) includes San Luis Obispo, Santa Barbara and Ventura counties. At the time of specific project-level environmental review, implementation of certain RTP projects, in combination with other future development within the region, has the potential to cumulatively improve the county's air quality because the RTP improvement projects are aimed at ameliorating existing deficiencies and managing future traffic demands through a combination of multimodal programs that incorporate SLOAPCD's Transportation Control Measures (TCMs). These measures, coupled with proposed RTP policies, facilitate or otherwise encourage alternative modes, transit, and pedestrian-oriented development. Other proposed RTP projects are intended to improve traffic flow, with resulting air quality benefits. Additionally, measures for short-term construction-related air quality impacts included in the Air Quality section were found to reduce all air quality impacts associated with transportation impacts to a less than significant level. Therefore, when considered in the context of the greater San Luis Obispo county area, implementation of the proposed RTP would not result in a cumulatively considerable impact. This is considered a **Class III, less than cumulatively considerable** impact.

5.3.3 Biological Resources

The cumulative environmental setting for biological resources consists of the bioregions within the greater San Luis Obispo County area and includes proposed, approved, and conceptual development anticipated within that area.

As noted above under Aesthetics/Visual Resources (5.3.1), the proposed RTP projects would not contemplated to be sited in "greenfields" nor in sensitive areas, but rather, on already cleared or developed land located in or adjacent to urban areas. While, under a worst-case scenario, the RTP could conceivably result in a project-, or site-specific, impact, such an impact would not rise to a level where it would either, due to scale or regional extent, contribute to a cumulatively considerable impact. Likewise, the proposed RTP, even when considered within the context of the greater Central Coast area, would not result in a considerable cumulative impact.

This is considered a **Class III, less than cumulatively considerable** impact.

5.3.4 Climate Change

A number of technical studies are available regarding the environmental effects of global climate change. The most authoritative of these are studies conducted by the Intergovernmental Panel on Climate Change (IPCC), established in 1988 by the World Meteorological Organization (WMO) and the United Nations Environment Programme (**UNEP**). In November 2017, UNEP sponsored the COP23 Climate

Conference in Bonn, Germany, a major focus of which was adaptation and resilience (www.cop23.de and https\\unfccc.int>conferences).

On a national level, EPA publishes annually, the National Climate Assessment. The 2019 Assessment was just recently released. The sections on "Coastal Communities and Systems" and Ocean and Marine Resources, Indigenous Communities, and Cumulative Impacts and Adaptation were most relevant. In addition, California published the 2018 - **California's** Fourth **Climate** Change **Assessment***(),* providing information to build resilience to ***climate*** impacts, including ***temperature***, wildfire, water, sea level rise, and governance. A number of studies have looked at coastal areas in particular. A study entitled, Underwater: Rising Seas, Chronic Floods, and the Implications for US Coastal Real Estate (2018**)** highlights the real estate economics aspect of climate change. Insurers are challenged with the inability to precisely quantify near-term impacts of climate change, rates, however; as the science and evidence evolve, insurance rates and community credit scores will increasingly reflect a heightened risk. Insurers appear especially concerned about sea-level rise in coastal communities.

The cumulative setting for climate change consists of policies and strategies, as well as conceptual projects, within the framework of a particular population growth scenario and associated GHG emissions. At the time of specific project-level environmental review, implementation of the capital improvement projects included in the RTP would not result in greenhouse gas emissions that would conflict with the goals of Assembly Bill 32. Nor would these improvements result in a significant impact on the environment due to the proposed 2019 RTP policies and strategies designed to reduce greenhouse gas emissions. The proposed RTP strategy improves the jobs-housing imbalances and allocates more housing as compact (which includes Single Family homes on lots sized up to 6,000 sq.ft.) in existing urban areas to balance both growth and conservation and to reduce the annual greenhouse gas emissions produced in the county. This is supposed to work alongside legislative greenhouse gas reduction standards imposed on automobile manufacturers and automotive fuel mixtures.

Within the project timeline, the total amount of greenhouse gas emissions will increase as a result of the project; however, emissions per capita will decrease. This difference is the result of anticipated population growth in the region. Compared with current conditions (2015), the county generated 19.6 lbs per capita of emissions per day (953,015 Metric Tons Annually). Implementation of the proposed RTP through the preferred growth scenario would result in 18.2 lbs per capita of emissions at 2045 (1,040,834 Metric Tons Annually within the County). Therefore, total GHG emissions are calculated to increase by 9.2 percent while the per capita emissions decrease by 7.2 percent by 2045.

The latest updated SB 375 targets for San Luis Obispo County is a 3% reduction in GHG emissions for 2020 and an 11% percent reduction for 2035 (per capita and relative to 2005). SLOCOG's current projections for 2020 and 2035, suggest the proposed project is consistent with the State regarding meeting these emissions reductions targets associated with transportation sources (Appendix C: 2019 RTP: Chapter 5).

Several adverse environmental effects have been identified that are projected to impact California over the next century, and others have been identified that could affect San Luis Obispo County. However, the extent of these environmental effects are still being defined, as the science of climate modeling advances. Generic areas of concern with regard to San Luis Obispo County include the following:

- Sea level rise;
- Adverse impacts on water supply availability;
- Increased severity of flooding events;
- Increased wildfire hazards;
- Alteration of natural habitats for special-status plant and animal species; and
- Air quality impacts.

The California Adaptation Strategy (CAS) issued a report on sea level rise in December 2009, which states that sea level along the west coast rises approximately 7.9 inches per century, or approximately 0.08 inches per year (CNRA 2009). However, sea level rise will vary by location. Some coastal areas will see minimal shifts in sea levels compared to other areas. The report also states that the rate of sea level rise is increasing. During the period 1993–2003, the rate was approximately 0.12 inches per year, which could demonstrate the result of human-induced warming on sea level.

A March 2009 study, *The Impact of Sea-Level Rise on the Pacific Coast*, conducted by the Pacific Institute, concluded that vast areas of the Pacific Coast are at risk from flooding with a sea-level rise of 1.4 meters (https://pacinst.org). This could potentially affect all coastal transportation projects, to one degree or another.

Estimated sea level rise inundation areas in 2100 in San Luis Obispo County were reviewed in a recent study entitled, Safeguarding California Plan: 2018 Update www.adaptationclearinghouse.org/resources/safeguarding-california-plan-2018-update.html)

The recent statewide studies demonstrate the types of climate change risks confronting coastal counties. like conducted a countywide climate resiliency or adaptation study with the exception of a brief reconnaissance study in connection with sea-level rise. More in-depth studies would be able to identify the most vulnerable areas of the county and, more specifically, address potential risks. Moreover, the State OPR is expected to draft general GHG mitigation measures, which MPOs and local government can adapt to their particular circumstances.

Thus far, the primary focus has been upon land use and transportation policy and investments. To the extent that the proposed RTP would achieve State emission reduction targets, the cumulative impact to that there Climate Change/GHG would, therefore, be **Class III, less than cumulatively considerable** impact. That is not to imply that there would not be any cumulative impacts at "ground level." OPR's emission targets are based upon per-capita GHG reductions. There would still occur an overall total increase in GHG emissions as a result of population growth statewide, which would result in increased risks from climate change.

SLOCOG, in coordination with SLOAPCD and San Luis Obispo County, could pursue grant funding to support a Countywide Climate Resiliency and Adaptation Plan as a basis for future policy development. This would also inform the process of developing CEQA Significance Thresholds and potential mitigation measures for Climate Change/GHGs. This proactive approach would enable SLOCOG and its partner agencies to get out in front of anticipated OPR policy initiatives, ensuring that the region is prepared to contend with increasing climate risks, including the environmental, health and safety, infrastructure, and economic risks. OPR's Integrated Climate Adaptation and Resiliency Program (ICARP) is coordinating state, regional, and local efforts to identify vulnerable communities (opr.ca.gov).

While this EIR focuses on the physical impacts of climate change, insurance companies and financial institutions are paying particularly close attention to the real estate economics implications of climate change. Insurers are challenged with the inability to precisely quantify near-term impacts of climate change. As the science and evidence evolve, market signals like insurance rates and community credit scores will increasingly reflect a heightened risk. Insurers appear especially concerned about sea-level rise in coastal communities. This will, in turn, influence policymakers as they consider their response to climate change.

Additional Sources:

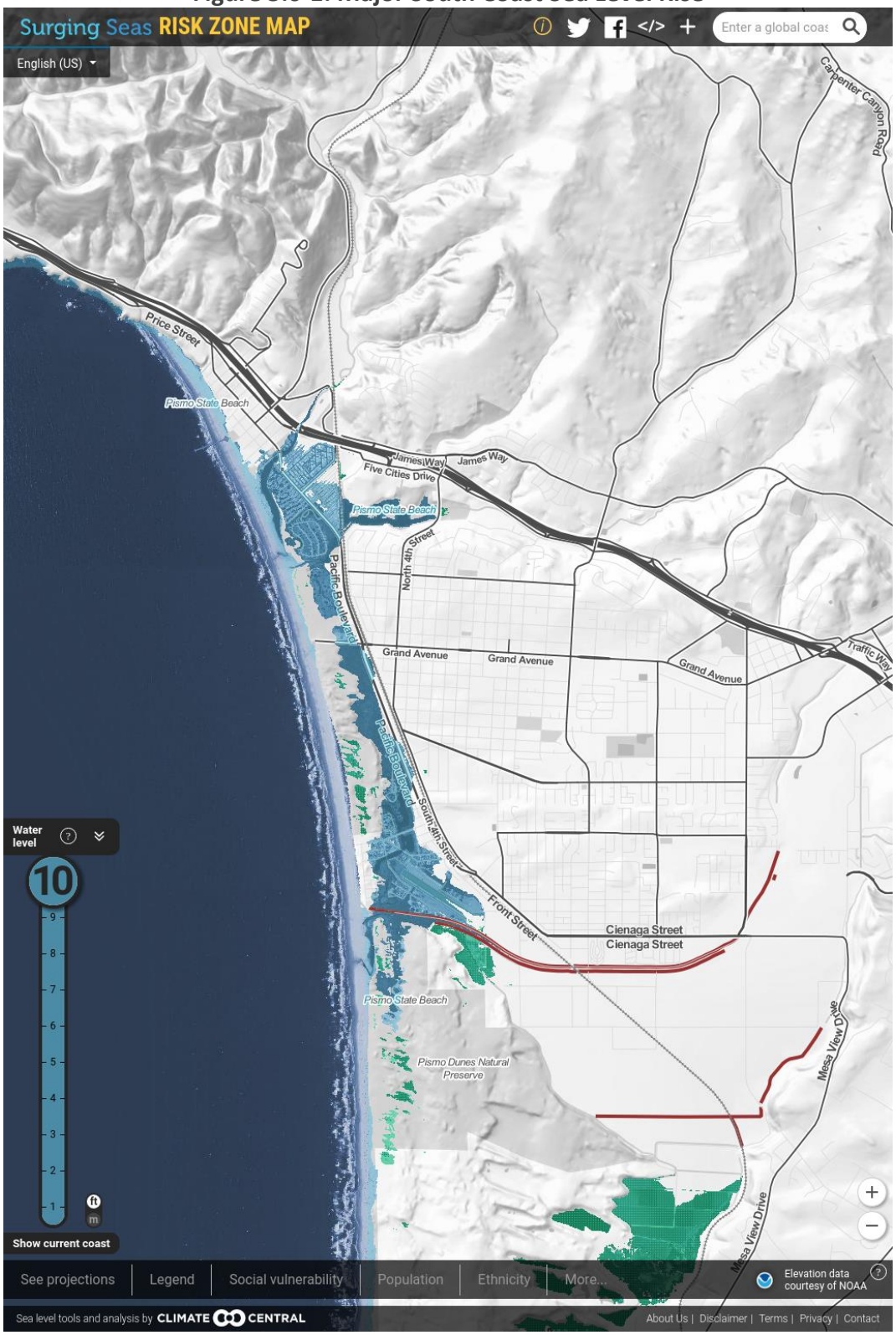
https://www.califaep.org/images/climate-change/AEP_White_Paper_Beyond_2020.pdf

https://www.ucsusa.org/global-warming/global-warming-impacts/when-rising-seas-hit-home-chronic-inundation-from-sea-level-rise#.XGUOtKJKj3g

5.3.5 Cultural and Tribal Cultural Resources

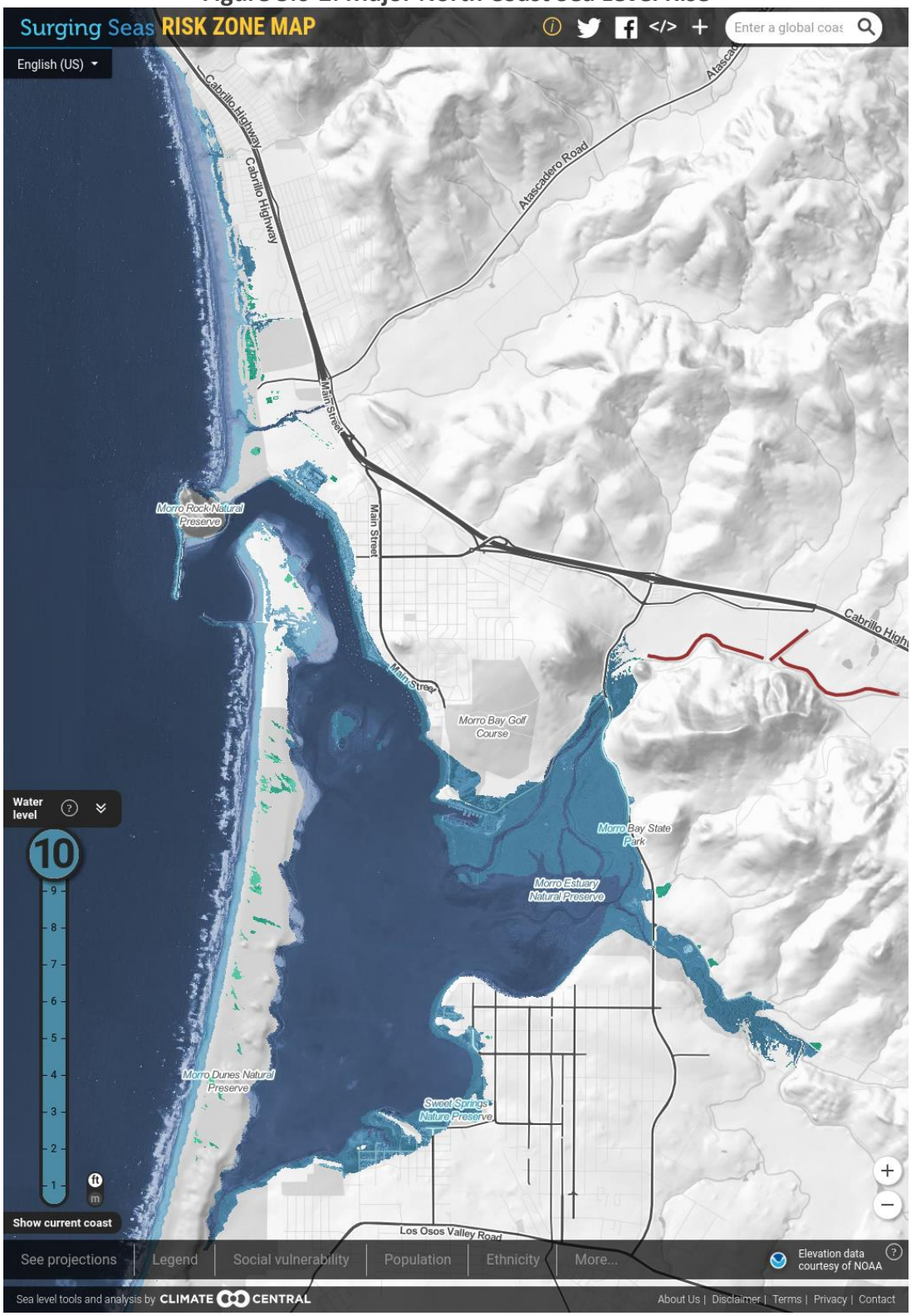
The cumulative environmental setting for cultural resources consists of the greater San Luis Obispo county area and proposed, approved, and conceptual development anticipated within that area. At the time of specific project-level environmental review, implementation of certain RTP projects, in combination with other future development within the region, has the potential to disturb yet unidentified historic, archaeological, and/or paleontological resources through direct removal or temporary disturbance during construction. It is anticipated that potential impacts to cultural and tribal cultural resources would be addressed on a case-by-case project-level basis through implementation of the provided mitigation measures and compliance with cited RTP goals, policies, and objectives. With the incorporation of these measures, cumulative impacts would be mitigated and reduced to a less than significant level. Therefore, when considered in the context of the greater San Luis Obispo county area, implementation of the proposed RTP would not result in a cumulatively considerable impact. This is considered a **Class III, less than cumulatively considerable** impact.

Figure 5.0-1: Major South Coast Sea Level Rise



https://riskfinder.climatecentral.org/

Figure 5.0-2: Major North Coast Sea Level Rise



https://riskfinder.climatecentral.org/

5.3.6 Energy Resources

The cumulative environmental setting for energy resources consists of the proposed, approved, and conceptual development anticipated within the county and immediate surrounding area. At the time of specific project-level environmental review, implementation of certain RTP projects, in combination with other future development in the region, has the potential to decrease the consumption of energy associated with vehicle fuel. Implementation of the RTP will result in a considerable savings of automotive fuel used per day over 2005 and 2015 conditions. Furthermore, the implementation of AB 1493 (Pavley I) will result in additional automotive fuel savings through an increase in the fuel economy of passenger vehicles and light-duty trucks. Therefore, when considered in the context of the greater San Luis Obispo county area, implementation of the proposed RTP would not result in a cumulatively considerable impact.
This is considered a **Class III, less than cumulatively considerable** impact.

5.3.7 Geology and Seismicity

The cumulative setting for geology and seismicity resources consists of the proposed, approved, and conceptual development anticipated within the county. At the time of specific project-level environmental review, implementation of certain RTP projects, in combination with other future development within the region, has the potential to impact, or result in the loss of, important soils and/or contribute to an increased risk of loss, injury, or death to travelers or damage to structures due to earthquakes, landslides, ground failure, or liquefaction. It is anticipated that potential impacts related to geology and seismicity would be addressed on a case-by-case project-level basis through implementation of the provided mitigation measures and compliance with cited RTP goals, policies, and objectives. With the incorporation of these measures, cumulative impacts would be mitigated and reduced to a less than significant level. Therefore, when considered within the context of the greater San Luis Obispo county area, implementation of the proposed RTP would not result a cumulatively considerable impact.
This is considered a **Class III, less than cumulatively considerable** impact.

5.3.8 Hazards and Hazardous Materials

The cumulative setting for hazards and hazardous materials consists of the proposed, approved, and conceptual development anticipated within San Luis Obispo County and general hazard use and risk in the surrounding counties. At the time of specific project-level environmental review, implementation of certain RTP projects, in combination with other future development within the region, has the potential to create significant hazards to the public or the environment through the routine transport, use, or disposal of hazardous materials and/or the disturbance of a contaminated property. In addition, certain projects could be located near an airport/airstrip or fire hazard zone or interfere with an emergency response plan. However, certain projects would also improve the condition of roadways, reducing the potential for roadway accidents that could result in transport-related hazardous material spills. It is anticipated that potential impacts would be addressed on a case-by-case project-level basis through implementation of the provided mitigation measures and compliance with cited RTP goals, policy objectives, and action strategies. With the incorporation of these measures, cumulative hazard and hazardous materials impacts would be mitigated and reduced to a less than significant level. Therefore,

when considered in the context of the greater San Luis Obispo county area, implementation of the proposed RTP would not result in a cumulatively considerable impact.
This is considered a **Class III, less than cumulatively considerable** impact.

5.3.9 Land Use and Agriculture

The cumulative setting for land use and agriculture consists of the proposed, approved, and conceptual development anticipated within the county and general land use trends in the surrounding counties. At the time of specific project-level environmental review, implementation of certain RTP projects, in combination with other future development in the region, has the potential to create land use conflicts, temporarily restrict access to facilities, permanently displace or disrupt existing homes and businesses, and/or convert agricultural, forest, and/or timberlands. However, it is far more likely that such activities would occur in existing urban or developed areas. Although this impact was considered significant in the Land Use section, these potential impacts are expected to be relatively minor and isolated.
Given the incorporation of RTP goals, policy objectives, and action strategies, cumulative impacts would be reduced to a less than significant level. This is considered a **Class III, less than cumulatively considerable** impact.

5.3.10 Noise

The cumulative setting for noise consists of the greater San Luis Obispo county area and proposed, approved, and conceptual development anticipated within that area. At the time of specific project-level environmental review, implementation of certain RTP projects, in combination with other future development within the region, has the potential to temporarily increase noise levels due to construction activities and permanently increase noise levels due to more developed circulation systems. It is anticipated that potential impacts would be addressed on a case-by-case project-level basis through implementation of the provided mitigation measures and compliance with the RTP goals, policy objectives, and action strategies. With the incorporation of these measures, cumulative impacts would be mitigated and reduced to a less than significant level for temporary construction-related impacts.
While there would be some elevated noise levels during construction, long-term noise increases associated with the RTP would not be significant enough to contribute to a cumulatively considerable impact. Furthermore, the slightly increased use of the county's circulation system would not be significant enough to translate into a cumulatively considerable impact. Moreover, SLOCOG's RTP includes numerous policies and programs to advance transit and alternative modes/active transportation, which would result in lower overall noise.

This is considered a **Class III, less than cumulatively considerable** impact.

5.3.11 Public Services and Utilities

The cumulative environmental setting for public services and utilities consists of service provider areas and includes proposed, approved, and conceptual development anticipated within those areas. At the time of specific project-level environmental review, implementation of certain RTP projects, in combination with other future development within the region, has the potential to temporarily interfere with transportation-related public services, such as police, fire, and/or emergency services and

response times and/or access to other public facilities, including government facilities, schools, and parks due to temporary construction-related activities, and/or could increase demand for solid waste and wastewater services in the county. It is anticipated that potential impacts would be addressed on a case-by-case project-level basis through implementation of the provided mitigation measures and compliance with cited RTP goals, policies, and objectives. With the incorporation of these measures, cumulative impacts would be mitigated and reduced to a less than significant level. Moreover, a number of beneficial impacts would be expected as a consequence of a more concentrated and compact urban form, thereby enabling more efficient provision of services and utilities. Therefore, when considered in the context of the greater San Luis Obispo county area, implementation of the proposed RTP would not result in a cumulatively considerable impact.

This is considered a **Class III, less than cumulatively considerable** impact.

5.3.12 Population, Housing, and Employment

The cumulative setting for population, housing, and employment consists of the proposed, approved, and conceptual development anticipated within San Luis Obispo County. At the time of specific project-level environmental review, implementation of certain RTP projects, in combination with other future development within the region, has limited potential to indirectly induce growth in the county by increasing transportation system capacity and/or permanently displace people and/or existing housing units, as well as businesses. This is primarily because of the limited scope and scale of construction that would take place and the fact that the development would generally occur on developed land and/or within or adjacent to existing urban areas. It is anticipated that potential impacts would be further addressed on a case-by-case project-level basis through implementation of the provided mitigation measures and compliance with RTP goals, policy objectives, and action strategies. With the incorporation of these measures, cumulative impacts would be further reduced. Therefore, when considered in the context of the greater San Luis Obispo county area, implementation of the proposed RTP would not result in a cumulatively considerable impact.

This is considered a **Class III, less than cumulatively considerable** impact.

5.3.13 Transportation and Circulation

The cumulative setting for transportation and circulation consists of the proposed, approved, and conceptual development anticipated within the county. At the time of specific project-level environmental review, implementation of certain RTP project, including contemplated, in combination with other future development within the region, has the potential to redistribute vehicle travel from other travel modes, times, or routes and/or result in localized traffic congestion. It is anticipated that potential impacts would be addressed on a case-by-case project-level basis through implementation of the provided mitigation measures and compliance with cited RTP goals, policy objectives, and action strategies. These strategies would have the effect of increasing mobility and multimodal options, thereby enhancing the existing system. Therefore, with the incorporation of these measures, cumulative impacts would be avoided or reduced to a less than significant level. When considered in the context of the greater San Luis Obispo county area, implementation of the proposed RTP would not significantly contribute to a significant cumulative impact.

This is considered a **Class III, less than cumulatively considerable** impact.

5.3.14 Water Resources

The cumulative setting for water resources consists of the proposed, approved, and conceptual development anticipated within the county and surrounding region. At the time of specific project-level environmental review, implementation of certain RTP projects, in combination with other future development within the region, has the potential to incrementally increase county-wide water demand, result in erosion and runoff, which could degrade surface water and groundwater quality, be subject to high flood hazards, and/or be located in areas subject to tsunami or seiche. It is anticipated that potential impacts would be addressed on a case-by-case project-level basis through implementation of the provided mitigation measures and compliance with cited RTP goals, policy objectives, and action strategies. With the incorporation of these measures, cumulative impacts would be mitigated and reduced to a less than significant level. Therefore, when considered in the context of the greater San Luis Obispo county area, implementation of the proposed RTP would not result in a cumulatively considerable impact.
This is considered a **Class III, less than cumulatively considerable** impact.

5.3.15 Agriculture Resources

This is considered a **Class III, less than cumulatively considerable** impact.

6.0 OTHER STATUTORY CONSIDERATIONS

This section discusses several topics statutorily required by the California Environmental Quality Act (CEQA) that summarize how the proposed RTP would affect the environment. The topics include irreversible environmental effects, significant and unavoidable environmental effects, a summary of effects found not to be significant (no impact), growth-inducing impacts, and a discussion of environmental justice.

6.1 Irreversible Environmental Effects/Irretrievable Commitment of Resources Legal Considerations

CEQA Section 15126.2(c) and Public Resources Code Sections 21100(b)(2) and 21100.1(a) require that an environmental impact report (EIR) include a discussion of significant irreversible environmental changes which would be involved in the proposed action should it be implemented. Irreversible environmental effects would occur if:

- The project would involve a large commitment of nonrenewable resources;
- The primary and secondary impacts of a project would generally commit future generations to similar uses (e.g., a highway provides access to a previously remote area);
- The project involves uses in which irreversible damage could result from any potential environmental accidents associated with the project; or
- The phasing of the proposed consumption of resources is not justified (e.g., the project involves the wasteful use of energy).

Determining whether the proposed project would result in significant irreversible effects requires a determination of whether key resources would be degraded or destroyed such that there would be little possibility of restoring them. Irretrievable commitments of resources should be evaluated to ensure that such current consumption is justified.

Analysis

The proposed project entails a series of future actions to implement the policies, goals, and objectives described in the RTP. Actions include a number of transportation system improvement projects, some of which would be built in areas where transportation facilities do not currently exist.

Significant irreversible changes are actions resulting from the adoption of the RTP that provide nonrenewable resource commitments for future generations that are unlikely reversible. Committed resources include:

- Consumption of a variety of resources, including land, energy, water, construction materials, and human resources. Each of these resources would be irretrievably committed for the construction of these projects. The RTP projects would require the commitment of nonrenewable or slowly renewable natural resources such as lumber and other forest products, sand and gravel, asphalt, metals, and fuel during construction, as well as energy resources during operation.

- Any indirect increase in the intensity of development along major transportation corridors and other local roads would result in an increase in regional energy consumption. Fossil fuels are the principal source of energy, and RTP projects will increase consumption of available supplies, including natural gas and electricity. These energy resource demands relate to initial project construction and the transport of people and goods.

6.2 Significant & Unavoidable Environmental Effects

CEQA Guidelines Section 15126.2(b) requires an EIR to discuss unavoidable significant environmental effects, including those that can be mitigated but not reduced to a level of insignificance. In addition, Section 15093(a) of the CEQA Guidelines allows the decision-making agency to determine that the benefits of a proposed project outweigh the unavoidable adverse environmental impacts of implementing the project. The San Luis Obispo Council of Governments (SLOCOG) is the lead agency for this project.

Projects can still be approved if they would have unavoidable adverse impacts if the entity with jurisdiction over the project prepares a "Statement of Overriding Considerations" setting forth the specific reasons for making such a judgment (CEQA Guidelines Section 15093). The environmental effects listed below are those that cannot be avoided if the RTP is implemented. They include impacts that can be mitigated, but not reduced to less than significant levels. The economic, social, technological, or other benefits of the RTP will be considered when balancing these impacts in the Statement of Overriding Considerations. The following significant and unavoidable impacts (project and cumulative) have been identified:

Visual Character/Lighting

Impact AES-2: Implementation of certain 2019 RTP roadway projects could contribute to the alteration of the county's semi-rural/rural areas to a somewhat more suburban/urban condition, through the addition of lighting and other urban features. In addition, implementation of some park-and-ride lot and sign projects could result in deterioration of the rural and semi-rural areas. This is considered Class I, **significant and unavoidable**, impact.

Natural Habitat Areas/Sensitive Species

Impact B-2: Implementation of certain 2019 RTP projects could permanently alter natural habitat areas and/or affect sensitive species. Impacts of many individual projects can likely be mitigated to a less than significant level. However, because the feasibility of mitigation cannot be determined at this time, this impact is considered Class I**, significant and unavoidable**.

Agricultural/Forest Conversion (Agricultural or Forestry Impact)

Impact LU-2: Implementation of certain 2019 RTP projects could convert agricultural and forest land to transportation infrastructure. Although the actual level of impact from individual projects is not known at this time, the overall impact to agricultural and forest lands, is assumed to be Class I, **significant and unavoidable**.

Long-Term Operational Noise Level Increases

Impact N-2: Various 2019 RTP projects could potentially expose sensitive receptors to noise in excess of normally acceptable levels. Projects that increase use of existing roadways, rail lines, and other transportation facilities, or realign such facilities, could result in substantial increases in noise levels at adjacent receptors. This would be considered a Class I, ***significant and unavoidable***, impact**.**

Conflict with Congestion Management: Increase Daily Vehicle Miles Traveled

Impact T-1: Implementation of the 2019 RTP would provide roadway and intermodal improvements and strategies to facilitate SLOCOG communities' development and economic viability in ways that reduce trips and travel distances. While the 2010 RTP would improve 2035 and 2045 traffic conditions compared to the no project condition, the LOS on certain roadway segments in the planning area would exceed applicable LOS thresholds beyond existing conditions. This is considered a Class I, **significant and unavoidable**, impact.

Cumulative Impacts

Aesthetics/Visual Resources, Biological Resources, Agricultural, Noise, and Transportation and Circulation.

6.3 Growth-Inducing Impacts

Legal Considerations

CEQA Guidelines Section 15126.2(d) requires that an EIR evaluate the growth-inducing impacts of a proposed action. A growth-inducing impact is defined in the CEQA Guidelines (Section 15126.2(d)) as the way in which a proposed project could foster economic or population growth, or the construction of additional housing, either directly or indirectly, in the surrounding environment. Included are projects that would remove obstacles to population growth.

Section 15126.2 cautions that it must not be assumed that growth in any area is necessarily beneficial, detrimental, or of little significance to the environment.

A project can have direct and/or indirect growth inducement potential. Direct growth inducement would result if a project, for example, involved construction of new housing. A project would have indirect growth inducement potential if it established substantial new permanent employment opportunities (e.g., through commercial, industrial, or governmental enterprises) or if it would involve a construction effort with substantial short-term employment opportunities that would indirectly stimulate the need for additional housing and services to support the new employment demand. Similarly, a project would indirectly induce growth if it would remove an obstacle to additional growth and development, such as removing a constraint on a required public service. A project providing an increased water supply in an area where water service historically limited growth could be considered growth-inducing.

The State CEQA Guidelines 15126.2(d) further explains that the environmental effects of induced growth are considered indirect impacts of the proposed action. These indirect impacts or secondary effects of growth may result in significant, adverse environmental impacts. Potential secondary effects

of growth include increased demand on other community and public services and infrastructure, increased traffic and noise, and adverse environmental impacts such as degradation of air and water quality, degradation or loss of plant and animal habitat, and conversion of agricultural and open space land to developed uses.

Growth inducement may constitute an adverse impact if the growth is not consistent with or accommodated by the land use plans and growth management plans and policies for the area affected. Local land use plans provide for land use development patterns and growth policies that allow for the orderly expansion of urban development supported by adequate urban public services, such as water supply, roadway infrastructure, sewer service, and solid waste service.

Analysis

Economic Growth

Implementation of the RTP would create short-term economic growth in San Luis Obispo County as a result of construction-related job opportunities. Implementation would also generate additional employment opportunities for roadway, vehicle, and landscape maintenance, as well as transportation facility cleanup. The potential employment increase may subsequently increase the demand for support services and utilities, which could generate secondary employment opportunities. This additional economic growth would likely raise the existing revenue base for San Luis Obispo County. Although such growth may incrementally increase economic activity in the county, significant physical effects beyond those identified in various section of this EIR are not expected to result from economic growth generated by the project. This is considered to be a **Class III, *less than significant*,** impact.

Population Growth

A moderate level of residential and nonresidential development is anticipated in the county through the year 2045. Much of the anticipated growth is likely to occur regardless of the extent to which the RTP is implemented. Implementation of the programs and projects identified in the RTP Action Element is intended to provide a regional transportation system that can accommodate the projected level of travel more effectively than would be possible through the maintenance of the existing transportation system.

The RTP implements some aspects of the circulation elements of the general plans of local jurisdictions in the region. Many of these projects could serve as traffic mitigation measures for anticipated growth under these local plans. Implementation of the RTP would not entail a substantial change in land use anywhere in the county. Rather, the plan responds to existing and projected transportation needs. The RTP proposes to distribute new growth to improve the jobs-housing imbalance as identified in the Sustainable Communities Strategy (SCS). This approach may set a new precedent for growth in the county; however, it would not be expected to result in significant adverse environmental impacts beyond those identified in various sections of this EIR and would likely result in beneficial impacts to the overall transportation system by reducing VMT, energy consumption, and improving air quality.

Removal of Obstacles to Growth

In general, the goals, policy objectives, and action strategies of the RTP support a multimodal transportation concept, emphasizing the importance of alternative forms of transportation, including bicycles, transit, and pedestrian activity. Most crucially, the Regional Transportation Plan (RTP)

contains goals, policy objectives, and action strategies that link transportation planning and regional land use patterns.

The potential for a long-term plan (such as an RTP) to be growth-inducing is a function of three factors: (1) the type of growth the plan envisions; (2) policy direction that regulates the rate at which this growth could occur; and (3) funding availability. The RTP provides a mechanism to implement the circulation projects described in local general plans and capital improvement programs. In that sense, an RTP is not growth-inducing. However, an RTP may contain policy direction that could influence the timing of these projects, generally through establishing funding priorities. If, for example, priority is given to projects that would increase roadway capacities or extend the existing roadway network, these improved roads (generally major arterials or freeways) would allow land development envisioned under the local general plans to occur at a faster rate. This could be considered growth-inducing. The following discussion evaluates RTP policy objectives to assess the plan's potential to be growth-inducing.

The following goal(s) and policy objective(s) encourages a reduction in the rate of growth of vehicle trips and vehicle miles traveled, and therefore would encourage land use patterns that promote a balance of transportation modes.

Goal 2. Improve intermodal mobility and accessibility for all people

Policy Objective 2.1 Provide reliable, integrated, and flexible travel choices across and between modes

Policy Objective 2.2 Improve opportunities for businesses and citizens to easily access goods, jobs, services, and housing.

Policy Objective 2.3 Integrate new technologies and concepts to make the transportation system more efficient and accessible.

Policy Objective 2.4 Identify and improve major transportation corridors for all users.

Policy Objective 2.5 Support cooperative planning activities that lead to an integrated intermodal transportation system.

Goal 5. Foster livable, healthy communities and promote social equity.

Policy Objective 5.1 Reflect community values while integrating land use and transportation planning to connect communities through a variety of transportation choices that promote healthy lifestyles.

Policy Objective 5.3 Support efforts to increase the supply and variety of housing, jobs, and basic services in locations that reduce trips, travel distances, and congestion on U.S. Route 101.

Policy Objective 5.4 Make investments and develop programs that support local land use decisions that implement the SCS and other strategies to reduce GHG emissions and make our communities more healthy, livable, sustainable, and mobile.

Goal 6. Practice environmental stewardship

Policy Objective 6.3 Reduce GHG emissions from vehicles and improve air quality in the region.

The following goal(s) and policy objective(s) encourage compact land use patterns to conserve energy, which would reduce the potential for future growth as a result of transportation improvements.

Goal 1. Preserve the transportation system

Policy Objective 1.1 Maintain and maximize efficiency of existing transportation system and operations.

Goal 5. Foster livable, healthy communities and promote social equity

Policy Objective 5.3 Support efforts to increase the supply and variety of housing, jobs, and basic services in locations that reduce trips, travel distances, and congestion on U.S. Route 101.

Policy Objective 5.4 Make investments and develop programs that support local land use decisions that implement the SCS and other strategies to reduce GHG emissions and make our communities more healthy, livable, sustainable, and mobile.

Goal 6. Practice environmental stewardship

Policy Objective 6.4 Conserve and protect natural, sensitive, and agricultural resources.

Goal 7. Practice financial stewardship

Policy Objective 7.1 Invest strategically to optimize transportation system performance for the long-term.

The following goal(s) and policy objective(s) encourage transportation investments that promote sustainable economic growth.

Goal 1. Preserve the transportation system

Policy Objective 1.1 Maintain and maximize efficiency of existing transportation system and operations.

Goal 7. Practice financial stewardship

Policy Objective 7.1 Invest strategically to optimize transportation system performance for the long-term.

Policy Objective 7.2 Assure early and continual involvement of all parties affected by major transportation improvement projects and programs.

Policy Objective 7.3 Seek sustainable, flexible, and competitive funding to maintain and improve the transportation system.

The following goal(s) and policy objective(s) discourage expansion of roadways beyond existing roadway right-of-way to preserve environmental resources and therefore serve to deter physical growth.

Goal 6. Practice environmental stewardship

Policy Objective 6.1 Integrate environmental considerations in all stages of planning and implementation.

Policy Objective 6.2 Preserve aesthetic resources and promote environmental enhancements.

Policy Objective 6.3 Reduce GHG emissions from vehicles and improve air quality in the region.

Policy Objective 6.4 Conserve and protect natural, sensitive, and agricultural resources.

The following goal(s) and policy objective(s) encourage connections between transportation planning and land use and facilities planning. Policies that limit development of transportation projects until the demand for such facilities and services warrant a project would ensure that transportation improvements would not facilitate growth, but rather would respond to existing demand.

Goal 1. Preserve the transportation system

Policy Objective 1.1 Maintain and maximize efficiency of existing transportation system and operations.

Policy Objective 1.2 Employ low-cost solutions whenever possible, including transportation demand management principles.

Policy Objective 2.5 Support cooperative planning activities that lead to an integrated intermodal transportation system.

Goal 5. Foster livable, healthy communities and promote social equity

Policy Objective 5.3 Support efforts to increase the supply and variety of housing, jobs, and basic services in locations that reduce trips, travel distances, and congestion on U.S. Route 101.

Policy Objective 5.4 Make investments and develop programs that support local land use decisions that implement the SCS and other strategies to reduce GHG emissions and make our communities more healthy, livable, sustainable, and mobile.

Policy Objective 7.2 Assure early and continual involvement of all parties affected by major transportation improvement projects and programs.

6.4 Environmental Justice

Environmental justice is the fair treatment and meaningful involvement of all people – regardless of race, color, national origin, or income – with respect to the development, implementation, and enforcement of environmental laws, regulations, and policies. Historically, federal agencies and funding recipients did not always consider all the impacts a particular project had on all the communities it affected. As a result, these activities sometimes caused disproportionately high and adverse impacts on minority populations and low-income populations that were not addressed.

Environmental justice will be achieved when everyone enjoys the same degree of protection from environmental and health hazards, and equal access to the decision-making process to have a healthy environment in which to live, learn, and work.

Legal Considerations

In 1994, President Bill Clinton signed Executive Order 12898, also known as *Federal Actions to Address Environmental Justice in Minority and Low Income Populations*, directing all federal agencies to identify and address the effects of all programs, policies, and activities on minority and low-income populations. Its purpose is to focus federal attention on the environmental and human health effects of federal actions on minority and low-income populations with the goal of achieving environmental protection for all communities.

Following the issuance of Executive Order 12898, the U.S. Department of Transportation (USDOT) and Federal Highway Administration (FHWA) issued environmental justice orders establishing policies and procedures related to their activities, including all phases of project development (e.g., planning, environmental review, design, right-of-way, construction, maintenance, operations) as well as all other programs and activities (e.g., public involvement, freight planning, safety measures, tribal consultation, and the Title VI Civil Rights Program). This includes the full, fair, and meaningful participation by all potentially affected communities through all phases of transportation decision-making to achieve an equitable distribution of benefits and burdens.

The Environmental Justice Act of 2017 expands upon Executive Order 12898, making further requirements on federal agencies to address environmental justice through agency actions and permitting decisions, and strengthening legal protections against environmental injustice for communities of color, low-income communities, and indigenous communities. This comprehensive bill strengthens environmental justice protections for vulnerable communities – and provides those communities with legal tools to protect their rights.

As the federally designated transportation planning organization for San Luis Obispo County, SLOCOG complies with these requirements. Through public notices and participation efforts, the Board and staff of SLOCOG make ongoing efforts to inform and involve all affected communities and residents in their outreach and planning efforts.

USDOT and FHWA's environmental justice policy has three major principles:

- Ensure the full and fair participation by all potentially affected communities in the transportation decision-making process;

- Avoid, minimize, or mitigate disproportionately high and adverse human health and environmental effects, including social and economic effects, on minority or low-income populations; and
- Prevent the denial of, reduction in, or significant delay in the receipt of benefits by minority or low-income populations.

As part of the transportation planning process, planners must: determine the potential benefits and burdens a proposed investment or action has on minority and low-income populations; quantify the expected effects (i.e., total, positive, and negative); and determine the appropriate course of action, whether avoidance, minimization, or mitigation. SLOCOG not only encourages public participation, but consistently devises new ways for obtaining meaningful feedback from all of the region's residents, with a strong emphasis on minorities and the economically disadvantaged.

Analysis

Transportation system improvement projects identified in the 2019 RTP are largely located in the more populous areas of the San Luis Obispo region, frequently in areas where transportation infrastructure already exists. Some individual transportation system improvement projects identified in the RTP may have adverse effects on minority and low-income populations, depending on the demographic characteristics of the area surrounding the proposed improvements at the time they are formally brought forward for environmental review. Potentially disproportionate adverse effects on these populations will be evaluated on a project-by-project basis, as appropriate, during the environmental review process for each of the individual transportation system improvement projects identified in the Plan.

7.0 REPORT PREPARERS AND REFERENCES

7.1 Preparers of the Environmental Report

San Luis Obispo Council of Governments

Executive Director ..... Pete Rodgers
Planning Director ..... James Worthley
Environmental Director ..... Morty Prisament
Transportation Planner ..... John DiNunzio
Transportation Planner ..... Stephen Hanamaikai
Transportation Planner ..... Tim GIlham
Transportation Planner ..... Daniel Audelo
Mobility Planning ..... Sarah Woolsey
Public Affairs and Planning ..... Anna Devers

San Luis Obispo County Public Works

Environmental Resource Specialist ..... Keith Miller

7.2 References/Documentation

California, State of

1. 1970a. California Relocation Assistance Law (Government Code Sections 7260 et seq.).
2. 2006a. The Global Warming Solutions Act, Assembly Bill (AB) 32.
3. 2008a Senate Bill (SB) 375 (Steinberg).

California Air Pollution Control Officers' Association (CAPCOA)

4. 2008a. CEQA and Climate Change.

California Air Resources Board (CARB)

5. 2001a. California Air Quality Data. 1998–2000.
6. 2008a. Recommended Approaches for Setting Interim Significance Thresholds for Greenhouse Gases under the California Environmental Quality Act.
7. 2009a. Almanac Emission Projection Data (Published in 2009).
8. 2009b. California Greenhouse Gas Inventory Data 2000 to 2006. Last Reviewed on December 10, 2009. [http://www.arb.ca.gov/cc/inventory/ data/data.htm]
9. 2010a. ADAM Air Quality Data Statistics [http://www.arb.ca.gov/adam/]
10. 2016a. Almanac Emission Projection Data
Year 2016 SIP Projection Data for San Luis Obispo County.
https://www.arb.ca.gov/app/emsinv/2017/emssumcat_query.php?F_YR=2012&F_SEASON=A&SP=SIP105ADJ&F_DIV=-4&F_AREA=DIS&F_DIS=SLO
11. 2017a. California's 2017 Climate Change Scoping Plan
https://www.arb.ca.gov/cc/scopingplan/scoping_plan_2017.pdf
12. 2018a. Updated Final Staff Report Proposed Update to the SB 375 Greenhouse Gas

Emission Reduction Targets Appendix A: MPO Target Recommendations and CARB Staff Recommendations https://www.arb.ca.gov/cc/sb375/appendix_a_feb2018.pdf

California Climate Action Team (CAT)

13. 2009a. Draft Climate Action Team Biennial Report to the Governor and Legislator.

California Department of Conservation, Division of Land Resource Protection (DOC)

14. 2006a. Farmland Mapping and Monitoring Program, FTP Map Data. [ftp://ftp.consrv.ca.gov/pub/dlrp/FMMP/pdf/2006/slo06.pdf]
15. 2008a. Williamson Act Program, FTP Map Data. ftp://ftp.consrv.ca.gov/pub/dlrp/wa/Map%20and%20PDF/San%20Luis%20Obispo/]
16. 2008b. Williamson Act Program – Reports and Statistics. [http://www.conservation.ca.gov/dlrp/lca/stats_reports/Documents/Statewide%20WA%20Enrollment%20(1991-07).xls]
17. 2016a. The California Land Conservation Act 2016 Status Report. [https://www.conservation.ca.gov/dlrp/wa/Documents/stats_reports/2016%20LCA%20Status%20Report.pdf]
18. 2016b. San Luis Obispo Important Farmland Data Availability, access 2019. [https://www.conservation.ca.gov/dlrp/fmmp/Pages/SanLuisObispo.aspx]

California Department of Finance (DOF)

19. 2009a. E-1 Population Estimates for Cities, Counties and the State with Annual Percent Change – January 1, 2008 and 2009. Sacramento, California.
20. 2009b. E-4 Population Estimates for Cities, Counties and State, 2001–2009 with 2000 Benchmark. Sacramento, California.
21. 2009c. E-5 Population and Housing Estimates for Cities, Counties and the State, 2001–2009, with 2000 Benchmark. Sacramento, California.

California Department of Fish and Wildlife

22. 2010a. California Natural Diversity Database (CNDDB)

California Department of Forestry and Fire Protection (Cal Fire)

23. 2003a. Fire Resource and Assessment Program (FRAP) Land Management Map.

California Department of Transportation (Caltrans)

24. 1986a. 1986 Route Concept Report.
25. 2002a. California Airport Land Use Planning Handbook.
26. 2002b. Transportation Related Earthborne Vibrations.
27. 2004a. Transportation and Construction-Induced Vibration Guidance Manual.
28. 2017a. Standard Environmental Reference – Noise Levels of Common Activities
29. 2008a. Office of Transportation Economics, Division of Transportation Planning. County Gasoline Estimates. [http://www.dot.ca.gov/hq/tpp/offices/ote/socio-economic_files/2008/San_Luis_Obispo.pdf]
30. 2008b. 2008 Traffic Volumes (Annual Average Daily Traffic (AADT)) for All Vehicles

on California State Highways.

31. 2009a. Caltrans Transportation Concept Reports/Fact Sheets for San Luis Obispo County, accessed July 2010. [http://www.dot.ca.gov/dist05/planning/system_planning.htm#TCRs]
32. 2010a. EIR/EA Annotated Outline Website, accessed January 26, 2010. [http://www.caltrans.ca.gov/ser/forum.htm]
33. 2010b. Caltrans Transportation Concept Reports/Fact Sheets for San Luis Obispo County, 2009, accessed 2010. [http://www.dot.ca.gov/dist05/planning/system_planning.htm#TCRs]
34. 2013a Transportation Construction and Vibration Guidance Manual [http://www.dot.ca.gov/hq/env/noise/pub/TCVGM_Sep13_FINAL.pdf]
35. 2017a 2017 Caltrans list of eligible and officially designated State Scenic Highways [http://www.dot.ca.gov/design/lap/livability/scenic-highways/index.html]

California Department of Toxic Substances Control (DTSC)

36. 2010a. Envirostor Database Findings for San Luis Obispo County.

California Department of Water Resources (DWR)

37. 2006a. Progress on Incorporating Climate Change Into Management of California Water Resources.

California Energy Commission (CEC)

38. 2006a. Inventory of California Greenhouse Gas Emissions and Sinks: 1990 to 2004. Publication CEC-600-2006-013-D. [http://www.energy.ca.gov/2006publications/CEC-600-2006-013/CEC-600-2006-013-SF.PDF]
39. 2008a. Building Energy Efficiency Standards for Residential and Nonresidential Buildings. [http://www.energy.ca.gov/title24/]
40. 2009a. The Future is Now: An Update on Climate Change Science Impacts and Response for California.

California Environmental Protection Agency (CAL-EPA)

41. 2007a. FAQS Frequently Asked Questions About Global Climate Change. [http://www.climatechange.ca.gov/publications/faqs.html]

California Natural Resources Agency (CNRA)

42. 2009. Discussion Draft: 2009 California Climate Adaptation Strategy.

California State Parks, Office of Historic Preservation (OHP)

43. 2010a. Accessed 2019. [http://ohp.parks.ca.gov/]

California State University, Monterey Bay's Central Coast Watershed Database

44. 2014a. Special Status Animals in the Central Coast Region. Accessed 2019. [http://ccows.csumb.edu/wiki/index.php/Special_Status_Animals_in_the_Central_Coast_Region]

California Transportation Commission (CTC)

45. 2007a. Regional Transportation Plan Guidelines.

ERA | AECOM | Beacon Economics

46. 2006a. Long Range Socio-Economic Projections Project Report (Year 2030).
47. 2009a. Update to Long Range Socio-Economic Projections Project Report.
48. 2017a 2050 Regional Growth Forecast for San Luis Obispo County https://www.dropbox.com/s/gia0tlcyqs51a3w/2050RegionalGrowthForecast_01FullReport_RevDec2018.pdf?dl=0

Federal Highway Administration (FHWA)

49. 1995a. Highway Traffic Noise Analysis and Abatement: Policy and Guidance.
50. 2006a. Roadway Construction Noise Model.

Federal Transit Administration (FTA)

51. 2006a. Transit Noise and Vibration Impact Assessment.
52. 2018a. Transit Noise and Vibration Impact Assessment Manual FTA Report No. 0123 https://www.transit.dot.gov/sites/fta.dot.gov/files/docs/research-innovation/118131/transit-noise-and-vibration-impact-assessment-manual-fta-report-no-0123_0.pdf

Governor's Office of Planning and Research, State of California (OPR)

53. 2007a. Guidelines for Implementation of the California Environmental Quality Act.

Intergovernmental Panel of Climate Change (IPCC)

54. 2007a. National Greenhouse Gas Inventories Programme. [http://www.ipcc-nggip.iges.or.jp]

Miller, Tyler G.

55. 2000a. Living in the Environment. 11th edition.

National Aeronautical and Space Administration (NASA)

56. 2009a. NASA Facts Online. [http://www.gsfc.nasa.gov/gsfc/service/gallery/fact_sheets/earthsci/green.htm

National Center for Conservation Science and Policy (NCCSP)

57. 2010. Projected Future Climatic and Ecological Conditions in San Luis Obispo County.

National Oceanic and Atmospheric Administration (NOAA)

58. 2009a. Global Climate Change Impacts on the United States.

Pacific Institute

59. 2019a. Website: Sea-Level Rise Maps. [http://www.pacinst.org/reports/sea_level_rise/maps/index.htm]

Paso Robles, City of

60. 2003a. City of El Paso de Robles General Plan, Noise Element.

http://www.prcity.com/government/departments/commdev/planning/general-plan-final.asp]

61. 2004a. Paso Robles Municipal Airport Master Plan Update. [http://www.prcity.com/government/departments/publicworks/airport/master-plan.asp]

Pismo Beach, City of

62. 1992a. City of Pismo Beach General Plan, Noise Element. [http://www.pismobeach.org/index.aspx?nid=109]

San Luis Obispo, City of

63. 2004a. City of San Luis Obispo General Plan, Noise Element. [http://slocity.org/communitydevelopment/generalplan.asp.]

San Luis Obispo, County of (SLO County)

64. 1988a. Local Coastal Program.
65. 1992a. San Luis Obispo County General Plan, Noise Element. [http://www.slocounty.ca.gov/planning/General_Plan__Ordinances_and_Elements.htm.]
66. 1993a. San Luis Obispo County General Plan.
67. 1995a. Energy Element of the General Plan.
68. 1998a. County Master Water Plan Update.
69. 1999a. San Luis Obispo County General Plan, Safety Element.
70. 2002a. Estero Area Plan.
71. 2003a. Adelaida Area Plan.
72. 2003b. Estero Area Plan Final Impact Report.
73. 2003c. Voluntary Oak Woodlands Management Plan.
74. 2005a. Bikeways Plan.
75. 2006a. Final Environmental Impact Report, San Luis Obispo County Regional Airport Master Plan Update, San Luis Obispo, CA. [http://sloairport.com/index.php?p=custom_page&page_name=Final%20Environmental %20Assessment%20and %20Impact%20Report]
76. 2007a. El Pomar-Estrella Area Plan.
77. 2007b. Huasna-Lopez Area Plan.
78. 2007c. Final Affordable Housing Ordinance Environmental Impact Report.
79. 2007d. Department of Agriculture/Weights and Measures. San Luis Obispo County Annual Crop Report.
80. 2007e. Water Resources, Division of Public Works. San Luis Region Integrated Regional Water Management Plan.
81. 2007f. Guiding Principles for Smart Growth.
82. 2008a. Airport Master Plan for Oceano Airport. [http://sloairport.com/index.php?p=custom_page&page_name=Oceano+Airport+ Master+Plan]
83. 2008b. Airport Master Plan for San Luis Obispo County Regional Airport. [http://sloairport.com/images/uploads/pages/File/master%20plan%20update/Table%20of%20Contents.pdf.]

84. 2009a. Coastal Zone Land Use Ordinance [CALUO], Title 23. Revised August.
85. 2009c. Conservation and Open Space Element Environmental Impact Report (EIR).
86. 2009d. Land Use Ordinance [LUO], Title 22. Revised September.
87. 2010a. Conservation and Open Space Element.
88. 2010b. Office of Emergency Services. Power Plant Information Website, accessed January 19, 2010. [http://www.slocounty.ca.gov/OES/NPPInfo/powerplantformation.htm]
89. 2017a San Luis Obispo County Oak Woodland Ordinance No. 3346 [https://www.slocounty.ca.gov/getattachment/2a416641-8fac-4df1-84dd-3a760a47a008/Oak-Woodland-Ordinance.aspx]

San Luis Obispo County APCD (SLOAPCD)

90. 2001a. 2001 Clean Air Plan San Luis Obispo County. [http://www.slocleanair.org/business/pdf/CAP.pdf]
91. 2005a. Options for Addressing Climate Change in San Luis Obispo County.
92. 2005b. Particulate Matter Report Implementation of SB 656 Requirements.
93. 2007a. Emission Inventory Summary. [http://www.slocleanair.org/air/emissions.php]
94. 2007b. Strategic Action Plan 2004 – 2009. [http://www.slocleanair.org/who/pdf/sap.pdf]
95. 2009a. San Luis Obispo County Air Quality. [http://www.slocleanair.org/air/index.php]
96. 2009b. San Luis Obispo County Attainment Status. [http://www.slocleanair.org/air/pdf/SLO_Attain_1209.pdf]
97. 2012. CEQA Air Quality Handbook: A Guide for Assessing the Air Quality Impacts for Projects Subject to CEQA Review. https://www.slocleanair.org/rules-regulations/land-use-ceqa.php
98. 2017. 2017 Annual Air Quality Report https://www.slocleanair.org/library/air-quality-reports.php
99. 2010a. EMFAC analysis, including correspondence between APCD and James Worthley, SLOCOG, dated June 18, 2010.
100. 2017a. Annual Air Quality Report – Countywide Ambient Air Quality Data https://storage.googleapis.com/slocleanair-org/images/cms/upload/files/2017aqrt-FINAL2.pdf
101. 2017b. Ambient Air Quality Standards for 2017 and Attainment Status https://storage.googleapis.com/slocleanair-org/images/cms/upload/files/2017aqrt-FINAL2.pdf

San Luis Obispo Council of Governments (SLOCOG)

102. 2015. 2014 Regional Transportation Plan [RTP] for San Luis Obispo County.
103. 2010 SB 375 Regional Greenhouse Gas Emission Reduction Target-Setting Report of the San Luis Obispo Region.
104. 2018 Regional (Average-Daily) Traffic Model.

United States Environmental Protection Agency (USEPA)

105. 1974a. Information on Levels of Environmental Noise Requisite to Protect Public Health and Welfare with an Adequate Margin of Safety.
106. 1971a. Noise from Construction Equipment and Operations, Building Equipment, and Home Appliances.

107. 2010a. Six Common Air Pollutants [http://www.epa.gov/air/urbanair/]
108. 2010b. Final GHG Tailoring Rule [http://www.epa.gov/NSR/actions.html#may10]
109. 2010c. Light-Duty Regulations [http://epa.gov/otaq/climate/regulations.htm]

APPENDICES

Appendix A Notice of Preparation (NOP) and Responses
Appendix B Mitigation Monitoring and Reporting Program (MMRP)

VOLUME II – TECHNICAL APPENDICES

Appendix C 2019 San Luis Obispo Council of Governments Regional Transportation Plan (SLOCOG 2019 RTP)
Appendix E San Luis Obispo County Areas of Potential Flooding, Erosion, and Wetland Migration Due to Climate Change
Appendix F Energy Resources Fuel Consumption Analyses

2019 RTP

Regional Transportation Plan

CONNECTING COMMUNITIES

Draft Environmental Impact Report

Appendix A: NOP and Responses

Public Draft

February, 2019

Notice of Preparation (NOP)

Notice of Preparation

Date: January 9, 2018

To: Interested Agencies, Organizations, and Individuals

From: Jeff Brubaker, AICP JSB
Transportation Planner
San Luis Obispo Council of Governments (SLOCOG) – **Lead Agency**
1114 Marsh Street
San Luis Obispo, CA 93401
(805) 788-2104

Website: www.slocog.org
Email: jbrubaker@slocog.org

Subject: Notice of Preparation and Scoping Meeting for a Program Environmental Impact Report (PEIR) for the San Luis Obispo Council of Governments 2019 Regional Transportation Plan and Sustainable Communities Strategy (RTP-SCS)

Information for individuals with disabilities

Individuals with disabilities may call SLOCOG to request auxiliary aids necessary to participate in the public review process. The SLOCOG office is accessible for persons with disabilities.

SLOCOG main telephone number: (805) 781-4219

The San Luis Obispo Council of Governments (SLOCOG) will be the Lead Agency and will prepare a Program Environmental Impact Report (PEIR) for the 2019 RTP-

SCS. SLOCOG is requesting input regarding the scope and content of the environmental information that is germane to your agency's statutory responsibilities in connection with the proposed project. SLOCOG is also requesting input from the public regarding the scope and content of the PEIR.

The project title, proposed action, project location, draft project description, summary of applicable federal and state planning provisions, scope of environmental review, potential environmental effects to be addressed in the PEIR, draft project alternatives, and CEQA streamlining are discussed in the attachment. An Initial Study is not attached and is not required pursuant to State CEQA Guidelines Sec. 15060(d).

Your response is requested at the earliest possible date, but not later than February 23, 2018. Please send your response to Jeff Brubaker, AICP, Transportation Planner, at the office or email address shown above. Please identify the name and phone number of a contact person at your agency.

The project is of regional significance; therefore, your comments regarding preparation of the PEIR are requested. **A scoping meeting will be held on Monday, January 22, 2018, from 4:00 p.m. to 7:00 p.m. in the Conference Room of the San Luis Obispo City-County Library, located at 995 Palm Street; San Luis Obispo, CA 93401.** A public hearing will also be held at the SLOCOG Board Meeting on Wednesday, February 7. The meeting is scheduled to begin at 8:30 a.m., and take place in the County Government Center, 1055 Monterey St., San Luis Obispo, CA 93401. Agency and-or public input can be provided at either of these meetings. Both locations are accessible for persons with disabilities.

SLOCOG looks forward to your comments regarding the scope of this project.

Attachment

Program Environmental Impact Report (PEIR) for the San Luis Obispo Council of Governments 2019 Regional Transportation Plan and Sustainable Communities Strategy (RTP-SCS)

Draft Project Description and Scope of Environmental Analysis

Project Title: Program Environmental Impact Report (PEIR) for the SLOCOG 2019 Regional Transportation Plan and Sustainable Communities Strategy (RTP-SCS)

Proposed Action: An update to the 2014 Regional Transportation Plan and Sustainable Communities Strategy

---

This Notice of Preparation (NOP) and Draft Project Description is being issued to resource agencies and the public to solicit comments that will assist in the preparation of the Draft PEIR and in the preparation of the 2019 RTP-SCS itself. The NOP requests feedback on the significant environmental issues and reasonable alternatives and mitigation measures which SLOCOG will need to have explored in the draft PEIR. It also requests feedback from agencies on whether the agency will be a Responsible Agency or Trustee Agency for the project. The draft project description and alternatives may be refined through the course of developing the RTP-SCS.

SLOCOG is embarking on a program to involve the public in the development of the RTP-SCS. The RTP-SCS planning process will engage a broad and diverse cross-section of the San Luis Obispo region.

Project Location

Within the corporate limits of San Luis Obispo County, California, including the seven (7) incorporated cities (Arroyo Grande, Atascadero, Grover Beach, Morro Bay, Paso Robles, Pismo Beach, San Luis Obispo) and all unincorporated areas under the jurisdiction of the County of San Luis Obispo. (Reference the attached map of San Luis Obispo County identifying the area to be addressed by the PEIR and the RTP-SCS.)

Capital improvement projects identified in the RTP-SCS are primarily located on or within:

- Public highways, streets, and roads

- Publicly-owned land proposed for bicycle-pedestrian projects, park-and-ride lots, or certain other transportation facilities
- Land with recorded easements or other public right-of-way instruments sufficient to provide clear title for the construction, maintenance, and operation of transportation facilities open to the traveling public
- Transit agency property
- Airport property
- Port district property
- Railroad corridors

Certain projects, programs, or services included or referenced in the RTP-SCS may extend beyond the San Luis Obispo County corporate limits, for example, those for which SLOCOG, its member agencies, or stakeholders are working cooperatively with MPOs, agencies, or stakeholders from other regions to address intercounty or interregional transportation needs.

Draft Project Description

The proposed project is the update of SLOCOG's RTP-SCS. SLOCOG's previous RTP-SCS was adopted in April 2015.

As a metropolitan planning organization (MPO), SLOCOG is required to prepare and adopt a Regional Transportation Plan (RTP). This long-range plan aims to achieve a coordinated, balanced, and multimodal regional transportation system including, but not limited to, pedestrian, bicycle, public transit, highway, rail, maritime and harbors, goods movement and aviation. The RTP must be action-oriented, fiscally-constrained, and pragmatic, considering both short-term (prior to 2020), mid-term (2021-35) and long-term (2036-2045) periods.

The RTP must be an internally consistent document and include the following elements:

- **Policy Element** – includes goals and policies that inform regional transportation planning, programming, and prioritization of projects, programs, and services. The Policy Element therefore shapes the Action Element.
- **Sustainable Communities Strategy (SCS)** – described further below
- **Action Element** – a multimodal investment program of transportation projects, programs, and services that addresses the region's transportation needs. The Action Element is subject to the funding limits outlined by the Financial Element, resulting in a fiscally-constrained list of projects. The Action Element may also include a list of projects that are determined to fulfill a need but are not expected to be fundable within the 25-year RTP timeframe. This is labeled as an unconstrained list. Projects on this list may be

able to be funded if extraordinary revenue sources become available, such as the receipt of certain competitive federal or state grants, augmentation of federal or state formula funding, voter approval of a regional sales tax measure for transportation purposes, or approval of a regional transportation impact fee program. The Action Element will identify priority corridors, placing an emphasis on jobs-housing balance and connecting communities.

- **Financial Element** – determines how much money is likely to be available to maintain, operate, and improve the region's transportation system over a 25-year period.

Sustainable Communities Strategy

Pursuant to SB 375 (2008), the Sustainable Communities Strategy (SCS) is an integral part of the RTP. The SCS must identify areas within the region sufficient to house all the population of the region, including all economic segments of the population, over the course of the planning period of the RTP, taking into account net migration into the region, population growth, household formation, and employment growth. An SCS identifies a "forecasted development pattern" for the region, which is informed by the inventory of existing land use throughout the region, along with the identification of sites where future development can be located, while still reducing vehicle-miles traveled (VMT) and greenhouse gas (GHG) emissions. The law establishes an approach to ensure that cities, counties, and the public are involved in the development of regional plans to achieve targets set by the California Air Resources Board (CARB) for reducing GHG emissions. An SCS must also be consistent with the general plans of the region's jurisdictions.

Because the SCS is a required element of the RTP, the terms "RTP-SCS" and "RTP" should be considered interchangeable for the purpose of this notice.

Federal and state planning provisions

The RTP-SCS is being updated in accordance with California Government Code Section 65080 et seq., Part 450 of Title 23 of the Code of Federal Regulations (23 CFR 450), and the California Transportation Commission 2017 Regional Transportation Plan Guidelines for Metropolitan Planning Organizations.

Federal regulations require that every MPO conduct transportation planning for its respective metropolitan area in a continuous, comprehensive, and cooperative way. One of the specific requirements is to prepare a long-range transportation plan, also known as a metropolitan

transportation plan, which covers at least a 20-year horizon. The plan must be updated every four or five years. Projects included in the region's transportation improvement program (TIP) must be consistent with the long-range transportation plan.

The RTP-SCS is the long-range transportation plan for San Luis Obispo County. SLOCOG is the MPO and Regional Transportation Planning Agency (RTPA) for San Luis Obispo County.

Plans must be performance- and outcome-based. To the extent practicable, performance targets must be developed in coordination with the State of California and area public transportation providers.

The transportation projects, strategies, and services recommended by the RTP-SCS must address factors relating to:

- safety
- security
- passenger and freight accessibility
- environmental protection
- energy conservation
- improved quality of life
- consistency between transportation improvements and planned growth and economic development
- connectivity and integration of various transportation modes
- transportation system management
- economic vitality and tourism
- transportation system preservation and resiliency

These factors must be addressed for both non-motorized and motorized modes of transportation.

Scope of Environmental Review

The PEIR will be prepared in compliance with the California Environmental Quality Act (CEQA), as amended. In general, the purpose of the PEIR will be to analyze the potential environmental effects of the adoption of the RTP-SCS; inform decision-makers, other responsible agencies, and members of the public as to the range of environmental impacts of the RTP-SCS; recommend a set of measures to mitigate any significant adverse regional impacts; and analyze several alternatives to the proposed RTP. The draft PEIR will be distributed for a minimum 30-day public review period.

The purpose of a "Program" Environmental Impact Report (PEIR) is to be a first-tier CEQA document that considers broad, regional impacts of a program of actions that are related to one another, per CEQA Guidelines Sec. 15168 (14 CCR, Ch. 3, Art. 11). The projects in the RTP-SCS are related geographically and often serve as logical parts of a chain of contemplated actions. For example, congestion along a corridor might be addressed by a combination of improved transit service, new bikeways, transportation demand management (TDM), and roadway operational improvements implemented over time. Projects, especially those involving the same mode of transportation or making improvements to facilities owned by the same agency, are often subject to similar regulatory and approval processes. See the "CEQA Streamlining" section below for further discussion of the benefits of a PEIR.

Potential Environmental Impacts

The impact categories listed below have been preliminarily identified for analysis in the PEIR for the SLOCOG 2019 RTP-SCS:

- Aesthetics and Visual Resources
- Agriculture and Forestry Resources
- Air Quality
- Biological Resources
- Cultural Resources and Tribal Cultural Resources
- Energy and Energy Conservation
- Environmental Justice
- Geology and Soils
- Greenhouse Gas Emissions and Climate Change
- Hazards and Hazardous Materials
- Hydrology and Water Resources
- Land Use and Planning
- Noise
- Population, Housing, and Employment
- Public Services
- Social and Economic Impacts
- Transportation
- Utilities and Service Systems

Draft Project Alternatives

A summary of SLOCOG's approach to developing preliminary alternatives to be analyzed in the PEIR is below. These alternatives are based on scenarios to be included in the 2019 RTP-SCS. The scenarios are, in turn, based on certain assumptions, such as the pace, location, and type of residential and employment growth in the region; and the assumed transportation projects to be built over the RTP-SCS planning period. The RTP-SCS and the PEIR process allow opportunities for the public; local elected and appointed officials; private, public, and nonprofit organizations; and other stakeholders to inform these assumptions with their input. The assumptions are also influenced by the requirement that MPOs meet GHG reduction targets set by CARB.

It is important to note that these alternatives will continue to be reviewed and refined before a Draft PEIR is issued.

Alternative 1: No Project Alternative

The No Project Alternative, required by CEQA, addresses the effect of not preparing the 2019 RTP-SCS. This alternative would be in conflict with federal and state requirements to periodically update the RTP-SCS and would result in the ineligibility of the region to receive federal and state funding and expose the region to litigation for non-compliance with state and federal law.

Build Scenarios

Multiple 2035 land use scenarios will be modeled, varying the mix of new housing (e.g. larger lot housing vs. compact housing) and dispersal patterns (informed by the 2050 Regional Growth Forecast and a factor emphasizing improved jobs-housing balance). An intermodal investment strategy will be used to support each scenario; investments may vary based on the scenario.

CEQA Streamlining

SB 375 (2008) contains CEQA incentives, or streamlining provisions, to encourage coordinated land use and transportation planning. Certain types of development projects (e.g. transit priority projects or mixed-use residential projects, as defined by the statute) may qualify for CEQA streamlining as long as the requisite criteria are met. Generally, meeting such criteria means that the proposed project is determined to be consistent with an adopted SCS. Consistency will be determined by the local jurisdiction that is the lead agency for each project to be streamlined. SLOCOG's primary role is to include appropriate information in the SCS, such as land use information as required by SB 375 or guidance to aid in interpreting land use

information that will allow a jurisdiction to make a consistency determination with respect to appropriate streamlining options on a project-by-project basis. Projects may qualify for streamlined review if they conform to the regional SCS. Projects qualify for streamlined CEQA review even if they conflict with local plans following adoption of the SCS.

SB 226 (2011) permits the streamlining of environmental review under CEQA for eligible infill projects. Review is generally limited to project-specific impacts not addressed as significant impacts in a prior, planning-level EIR applicable to the project. If an impact can be substantially mitigated by a uniformly applicable development policy or standard, it need not be reviewed for the purpose of CEQA compliance.

SB 743 (2013) requires that automobile delay, as described solely by level of service (LOS) or similar measures of vehicular capacity or traffic congestion, shall not be considered a significant impact on the environment pursuant to CEQA, except in certain locations. The bill requires the Office of Planning and Research (OPR) to accordingly propose changes to the CEQA guidelines. OPR released proposed changes in the fall of 2017. The proposed changes emphasize vehicle-miles traveled (VMT) as an appropriate alternative metric with which to analyze transportation impacts, and determine their significance, under CEQA. These changes are likely to pertain to both land use development projects and transportation capital projects. The Natural Resources Agency must adopt the changes before they go into effect.

CEQA Guidelines Sec. 15168 includes provisions on how PEIRs relate to environmental documentation of, and mitigations for, subsequent activities within the program. Generally, these activities must be examined in the light of the PEIR to determine whether an additional environmental document must be prepared. Pursuant to the CEQA Guidelines, for subsequent activities within the program, the PEIR may serve as a reference for impact analysis, consideration of alternatives, or mitigations; as a basis or reference for the activity's Initial Study; or as a way to focus an individual activity's EIR on only those impacts not sufficiently addressed in the PEIR. The PEIR may therefore provide for a more exhaustive and efficient analysis of certain impacts, including cumulative impacts, compared to each individual project providing a unique analysis of the same impact. It may result in less duplicative reconsideration of basic policy issues and less paperwork.

1/9/18
Date

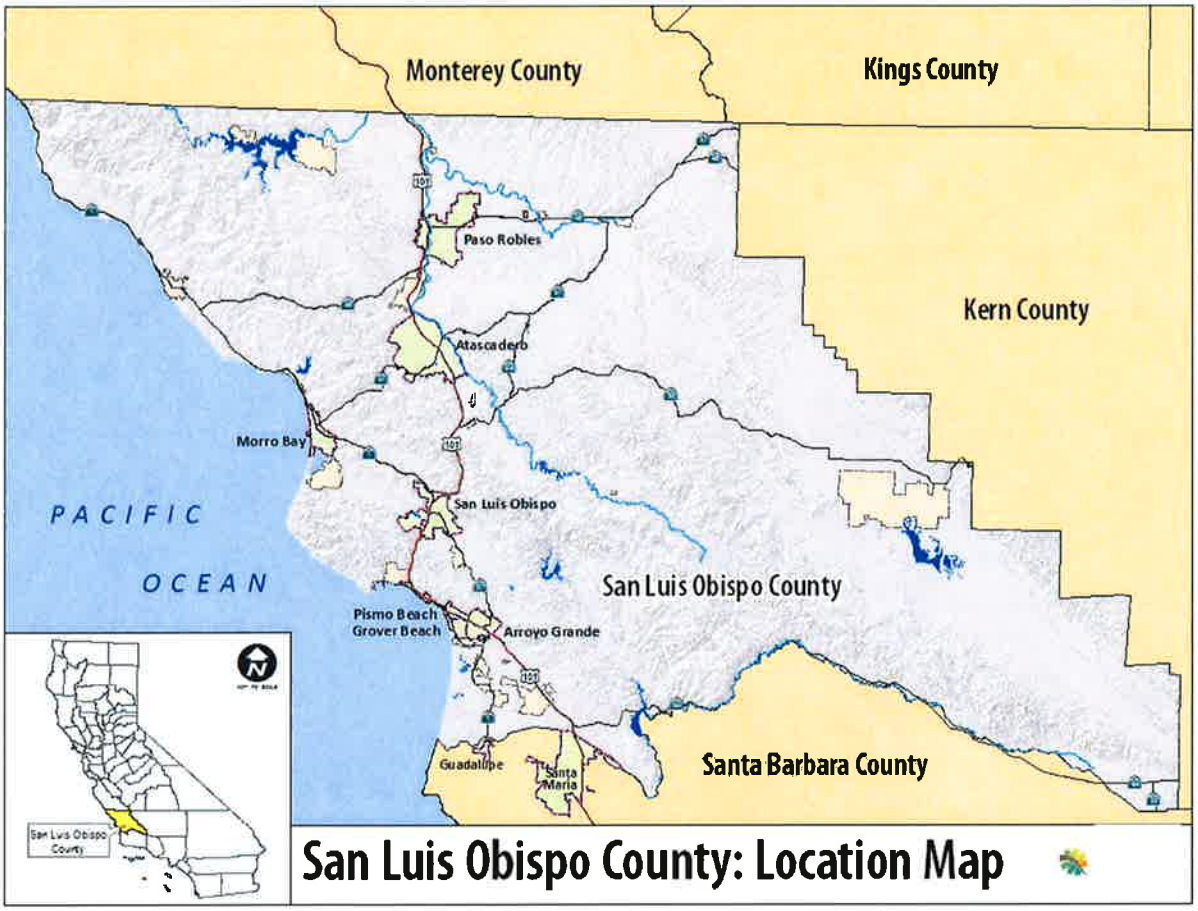
Signature: Pete Rodgers
Peter Rodgers

Title: Deputy Director
Phone: 805-781-4219

SLOCOG 2019 Regional Transportation Plan and Sustainable Communities Strategy (RTP-SCS)

Program Environmental Impact Report (PEIR)

Project Map



NOP Comment Letters

Letter 1 Native American Heritage Commission
-Frank Lienert, Associate Governmental Program Analyst, Received 2-5-18
Letter 2 San Luis Obispo County Air Pollution Control District
-Andy Mutziger, Air Quality Specialist, Received 3-1-18
Letter 3 San Miguel CSD
-Tamara Parent, Board Clerk, 2-5-18
Letter 4 Citizen e-mail
Eugene Jud, Received 2-23-18
Letter 5 Northern Chumash Tribal Council, Inc.
-Fred Collins, Chair NCTC, Received 1-22-18
Letter 6 yak tityu tityu yak tilhini – Northern Chumash Tribe
-Mona Olivas Tucker, Chair, Received 2-8-18

Copy to: Correspondence file
ORIGINAL: Jeff B.

STATE OF CALIFORNIA
NATIVE AMERICAN HERITAGE COMMISSION
Environmental and Cultural Department
1550 Harbor Blvd., Suite 100
West Sacramento, CA 95691
Phone (916) 373-3710
Fax (916) 373-5471
Email: nahc@nahc.ca.gov
Website: http://www.nahc.ca.gov
Twitter: @CA_NAHC

Edmund G. Brown Jr., Governor

Letter 1

January 31, 2018

Jeff Brubaker
San Luis Obispo Council of Governments
1114 Marsh St.
San Luis Obispo, CA 93401

RE: SCH#2018011015 Pier for SLOCOG 2019 Regional Transportation Plan, San Luis Obispo County

Dear Mr. Brubaker,

The Native American Heritage Commission has received the Notice of Preparation (NOP), Draft Environmental Impact Report (DEIR) or Early Consultation for the project referenced above. The California Environmental Quality Act (CEQA) (Pub. Resources Code § 21000 et seq.), specifically Public Resources Code section 21084.1, states that a project that may cause a substantial adverse change in the significance of an historical resource is a project that may have a significant effect on the environment. (Pub. Resources Code § 21084.1; Cal. Code Regs., tit.14, § 15064.5 (b) (CEQA Guidelines Section 15064.5 (b)). If there is substantial evidence, in light of the whole record before a lead agency, that a project may have a significant effect on the environment, an environmental impact report (EIR) shall be prepared. (Pub. Resources Code § 21080 (d); Cal. Code Regs., tit. 14, § 15064 subd.(a)(1) (CEQA Guidelines § 15064 (a)(1)). In order to determine whether a project will cause a substantial adverse change in the significance of a historical resource, a lead agency will need to determine whether there are historical resources with the area of project effect (APE).

CEQA was amended significantly in 2014. Assembly Bill 52 (Gatto, Chapter 532, Statutes of 2014) (AB 52) amended CEQA to create a separate category of cultural resources, "tribal cultural resources" (Pub. Resources Code § 21074) and provides that a project with an effect that may cause a substantial adverse change in the significance of a tribal cultural resource is a project that may have a significant effect on the environment. (Pub. Resources Code § 21084.2). Public agencies shall, when feasible, avoid damaging effects to any tribal cultural resource. (Pub. Resources Code § 21084.3 (a)). **AB 52 applies to any project for which a notice of preparation or a notice of negative declaration or mitigated negative declaration is filed on or after July 1, 2015.** If your project involves the adoption of or amendment to a general plan or a specific plan, or the designation or proposed designation of open space, on or after March 1, 2005, it may also be subject to Senate Bill 18 (Burton, Chapter 905, Statutes of 2004) (SB 18). **Both SB 18 and AB 52 have tribal consultation requirements.** If your project is also subject to the federal National Environmental Policy Act (42 U.S.C. § 4321 et seq.) (NEPA), the tribal consultation requirements of Section 106 of the National Historic Preservation Act of 1966 (154 U.S.C. 300101, 36 C.F.R. § 800 et seq.) may also apply.

The NAHC recommends consultation with California Native American tribes that are traditionally and culturally affiliated with the geographic area of your proposed project as early as possible in order to avoid inadvertent discoveries of Native American human remains and best protect tribal cultural resources. Below is a brief summary of portions of AB 52 and SB 18 as well as the NAHC's recommendations for conducting cultural resources assessments. **Consult your legal counsel about compliance with AB 52 and SB 18 as well as compliance with any other applicable laws.**

Letter 1

AB 52

AB 52 has added to CEQA the additional requirements listed below, along with many other requirements:

1. Fourteen Day Period to Provide Notice of Completion of an Application/Decision to Undertake a Project: Within fourteen (14) days of determining that an application for a project is complete or of a decision by a public agency to undertake a project, a lead agency shall provide formal notification to a designated contact of, or tribal representative of, traditionally and culturally affiliated California Native American tribes that have requested notice, to be accomplished by at least one written notice that includes:
   - **a.** A brief description of the project.
   - **b.** The lead agency contact information.
   - **c.** Notification that the California Native American tribe has 30 days to request consultation. (Pub. Resources Code § 21080.3.1 (d)).
   - **d.** A "California Native American tribe" is defined as a Native American tribe located in California that is on the contact list maintained by the NAHC for the purposes of Chapter 905 of Statutes of 2004 (SB 18). (Pub. Resources Code § 21073).

2. Begin Consultation Within 30 Days of Receiving a Tribe's Request for Consultation and Before Releasing a Negative Declaration, Mitigated Negative Declaration, or Environmental Impact Report: A lead agency shall begin the consultation process within 30 days of receiving a request for consultation from a California Native American tribe that is traditionally and culturally affiliated with the geographic area of the proposed project. (Pub. Resources Code § 21080.3.1, subds. (d) and (e)) and prior to the release of a negative declaration, mitigated negative declaration or environmental impact report. (Pub. Resources Code § 21080.3.1(b)).
   - **a.** For purposes of AB 52, "consultation shall have the same meaning as provided in Gov. Code § 65352.4 (SB 18). (Pub. Resources Code § 21080.3.1 (b)).

3. Mandatory Topics of Consultation If Requested by a Tribe: The following topics of consultation, if a tribe requests to discuss them, are mandatory topics of consultation:
   - **a.** Alternatives to the project.
   - **b.** Recommended mitigation measures.
   - **c.** Significant effects. (Pub. Resources Code § 21080.3.2 (a)).

4. Discretionary Topics of Consultation: The following topics are discretionary topics of consultation:
   - **a.** Type of environmental review necessary.
   - **b.** Significance of the tribal cultural resources.
   - **c.** Significance of the project's impacts on tribal cultural resources.
   - **d.** If necessary, project alternatives or appropriate measures for preservation or mitigation that the tribe may recommend to the lead agency. (Pub. Resources Code § 21080.3.2 (a)).

5. Confidentiality of Information Submitted by a Tribe During the Environmental Review Process: With some exceptions, any information, including but not limited to, the location, description, and use of tribal cultural resources submitted by a California Native American tribe during the environmental review process shall not be included in the environmental document or otherwise disclosed by the lead agency or any other public agency to the public, consistent with Government Code sections 6254 (r) and 6254.10. Any information submitted by a California Native American tribe during the consultation or environmental review process shall be published in a confidential appendix to the environmental document unless the tribe that provided the information consents, in writing, to the disclosure of some or all of the information to the public. (Pub. Resources Code § 21082.3 (c)(1)).

6. Discussion of Impacts to Tribal Cultural Resources in the Environmental Document: If a project may have a significant impact on a tribal cultural resource, the lead agency's environmental document shall discuss both of the following:
   - **a.** Whether the proposed project has a significant impact on an identified tribal cultural resource.
   - **b.** Whether feasible alternatives or mitigation measures, including those measures that may be agreed to pursuant to Public Resources Code section 21082.3, subdivision (a), avoid or substantially lessen the impact on the identified tribal cultural resource. (Pub. Resources Code § 21082.3 (b)).

7. Conclusion of Consultation: Consultation with a tribe shall be considered concluded when either of the following occurs:
   a. The parties agree to measures to mitigate or avoid a significant effect, if a significant effect exists, on a tribal cultural resource; or
   b. A party, acting in good faith and after reasonable effort, concludes that mutual agreement cannot be reached. (Pub. Resources Code § 21080.3.2 (b)).

8. Recommending Mitigation Measures Agreed Upon in Consultation in the Environmental Document: Any mitigation measures agreed upon in the consultation conducted pursuant to Public Resources Code section 21080.3.2 shall be recommended for inclusion in the environmental document and in an adopted mitigation monitoring and reporting program, if determined to avoid or lessen the impact pursuant to Public Resources Code section 21082.3, subdivision (b), paragraph 2, and shall be fully enforceable. (Pub. Resources Code § 21082.3 (a)).

9. Required Consideration of Feasible Mitigation: If mitigation measures recommended by the staff of the lead agency as a result of the consultation process are not included in the environmental document or if there are no agreed upon mitigation measures at the conclusion of consultation, or if consultation does not occur, and if substantial evidence demonstrates that a project will cause a significant effect to a tribal cultural resource, the lead agency shall consider feasible mitigation pursuant to Public Resources Code section 21084.3 (b). (Pub. Resources Code § 21082.3 (e)).

10. Examples of Mitigation Measures That, If Feasible, May Be Considered to Avoid or Minimize Significant Adverse Impacts to Tribal Cultural Resources:
    a. Avoidance and preservation of the resources in place, including, but not limited to:
        i. Planning and construction to avoid the resources and protect the cultural and natural context.
        ii. Planning greenspace, parks, or other open space, to incorporate the resources with culturally appropriate protection and management criteria.
    b. Treating the resource with culturally appropriate dignity, taking into account the tribal cultural values and meaning of the resource, including, but not limited to, the following:
        i. Protecting the cultural character and integrity of the resource.
        ii. Protecting the traditional use of the resource.
        iii. Protecting the confidentiality of the resource.
    c. Permanent conservation easements or other interests in real property, with culturally appropriate management criteria for the purposes of preserving or utilizing the resources or places.
    d. Protecting the resource. (Pub. Resource Code § 21084.3 (b)).
    e. Please note that a federally recognized California Native American tribe or a nonfederally recognized California Native American tribe that is on the contact list maintained by the NAHC to protect a California prehistoric, archaeological, cultural, spiritual, or ceremonial place may acquire and hold conservation easements if the conservation easement is voluntarily conveyed. (Civ. Code § 815.3 (c)).
    f. Please note that it is the policy of the state that Native American remains and associated grave artifacts shall be repatriated. (Pub. Resources Code § 5097.991).

11. Prerequisites for Certifying an Environmental Impact Report or Adopting a Mitigated Negative Declaration or Negative Declaration with a Significant Impact on an Identified Tribal Cultural Resource: An environmental impact report may not be certified, nor may a mitigated negative declaration or a negative declaration be adopted unless one of the following occurs:
    a. The consultation process between the tribes and the lead agency has occurred as provided in Public Resources Code sections 21080.3.1 and 21080.3.2 and concluded pursuant to Public Resources Code section 21080.3.2.
    b. The tribe that requested consultation failed to provide comments to the lead agency or otherwise failed to engage in the consultation process.
    c. The lead agency provided notice of the project to the tribe in compliance with Public Resources Code section 21080.3.1 (d) and the tribe failed to request consultation within 30 days. (Pub. Resources Code § 21082.3 (d)).

The NAHC's PowerPoint presentation titled, "Tribal Consultation Under AB 52: Requirements and Best Practices" may be found online at: http://nahc.ca.gov/wp-content/uploads/2015/10/AB52TribalConsultation_CalEPAPDF.pdf

Letter 1

SB 18

SB 18 applies to local governments and requires local governments to contact, provide notice to, refer plans to, and consult with tribes prior to the adoption or amendment of a general plan or a specific plan, or the designation of open space. (Gov. Code § 65352.3). Local governments should consult the Governor's Office of Planning and Research's "Tribal Consultation Guidelines," which can be found online at: https://www.opr.ca.gov/docs/09_14_05_Updated_Guidelines_922.pdf

Some of SB 18's provisions include:

1. Tribal Consultation: If a local government considers a proposal to adopt or amend a general plan or a specific plan, or to designate open space it is required to contact the appropriate tribes identified by the NAHC by requesting a "Tribal Consultation List." If a tribe, once contacted, requests consultation the local government must consult with the tribe on the plan proposal. **A tribe has 90 days from the date of receipt of notification to request consultation unless a shorter timeframe has been agreed to by the tribe.** (Gov. Code § 65352.3 (a)(2)).
2. No Statutory Time Limit on SB 18 Tribal Consultation. There is no statutory time limit on SB 18 tribal consultation.
3. Confidentiality: Consistent with the guidelines developed and adopted by the Office of Planning and Research pursuant to Gov. Code section 65040.2, the city or county shall protect the confidentiality of the information concerning the specific identity, location, character, and use of places, features and objects described in Public Resources Code sections 5097.9 and 5097.993 that are within the city's or county's jurisdiction. (Gov. Code § 65352.3 (b)).
4. Conclusion of SB 18 Tribal Consultation: Consultation should be concluded at the point in which:
    a. The parties to the consultation come to a mutual agreement concerning the appropriate measures for preservation or mitigation; or
    b. Either the local government or the tribe, acting in good faith and after reasonable effort, concludes that mutual agreement cannot be reached concerning the appropriate measures of preservation or mitigation. (Tribal Consultation Guidelines, Governor's Office of Planning and Research (2005) at p. 18).

Agencies should be aware that neither AB 52 nor SB 18 precludes agencies from initiating tribal consultation with tribes that are traditionally and culturally affiliated with their jurisdictions before the timeframes provided in AB 52 and SB 18. For that reason, we urge you to continue to request Native American Tribal Contact Lists and "Sacred Lands File" searches from the NAHC. The request forms can be found online at: http://nahc.ca.gov/resources/forms/

NAHC Recommendations for Cultural Resources Assessments

To adequately assess the existence and significance of tribal cultural resources and plan for avoidance, preservation in place, or barring both, mitigation of project-related impacts to tribal cultural resources, the NAHC recommends the following actions:

1. Contact the appropriate regional California Historical Research Information System (CHRIS) Center (http://ohp.parks.ca.gov/?page_id=1068) for an archaeological records search. The records search will determine:
    a. If part or all of the APE has been previously surveyed for cultural resources.
    b. If any known cultural resources have been already been recorded on or adjacent to the APE.
    c. If the probability is low, moderate, or high that cultural resources are located in the APE.
    d. If a survey is required to determine whether previously unrecorded cultural resources are present.

2. If an archaeological inventory survey is required, the final stage is the preparation of a professional report detailing the findings and recommendations of the records search and field survey.
    a. The final report containing site forms, site significance, and mitigation measures should be submitted immediately to the planning department. All information regarding site locations, Native American human remains, and associated funerary objects should be in a separate confidential addendum and not be made available for public disclosure.

Letter 1

b. The final written report should be submitted within 3 months after work has been completed to the appropriate regional CHRIS center.

3. Contact the NAHC for:
   a. A Sacred Lands File search. Remember that tribes do not always record their sacred sites in the Sacred Lands File, nor are they required to do so. A Sacred Lands File search is not a substitute for consultation with tribes that are traditionally and culturally affiliated with the geographic area of the project's APE.
   b. A Native American Tribal Consultation List of appropriate tribes for consultation concerning the project site and to assist in planning for avoidance, preservation in place, or, failing both, mitigation measures.

4. Remember that the lack of surface evidence of archaeological resources (including tribal cultural resources) does not preclude their subsurface existence.
   a. Lead agencies should include in their mitigation and monitoring reporting program plan provisions for the identification and evaluation of inadvertently discovered archaeological resources per Cal. Code Regs., tit. 14, section 15064.5(f) (CEQA Guidelines section 15064.5(f)). In areas of identified archaeological sensitivity, a certified archaeologist and a culturally affiliated Native American with knowledge of cultural resources should monitor all ground-disturbing activities.
   b. Lead agencies should include in their mitigation and monitoring reporting program plans provisions for the disposition of recovered cultural items that are not burial associated in consultation with culturally affiliated Native Americans.
   c. Lead agencies should include in their mitigation and monitoring reporting program plans provisions for the treatment and disposition of inadvertently discovered Native American human remains. Health and Safety Code section 7050.5, Public Resources Code section 5097.98, and Cal. Code Regs., tit. 14, section 15064.5, subdivisions (d) and (e) (CEQA Guidelines section 15064.5, subds. (d) and (e)) address the processes to be followed in the event of an inadvertent discovery of any Native American human remains and associated grave goods in a location other than a dedicated cemetery.

If you have any questions, please contact me at my email address: frank.lienert@nahc.ca.gov

Sincerely,

Frank Lienert
Associate Governmental Program Analyst

cc: State Clearinghouse

SLO COUNTY apcd | Air Pollution Control District
San Luis Obispo County

Letter 2

MAR 1 2018

February 27, 2018

Mr. Jeff Brubaker, AICP
San Luis Obispo Council of Governments
1114 Marsh Street
San Luis Obispo, CA 93401

SUBJECT: APCD Comments Regarding the NOP for the 2019 RTP-SCS Program EIR

Dear Mr. Brubaker:

Thank you for including the San Luis Obispo County Air Pollution Control District (APCD) in the environmental review process. We have completed our review of the Notice of Preparation (NOP) for the Environmental Impact Report (EIR) of the proposed county wide 2019 Regional Transportation Plan and Sustainable Communities Strategy (RTP-SCS).

The proposed project is the update of San Luis Obispo County Council of Government's (SLOCOG) 2014 RTP-SCS that was adopted in April 2015. As a metropolitan planning organization (MPO), SLOCOG is required to prepare and adopt a Regional Transportation Plan (RTP). This long-range plan aims to achieve a coordinated, balanced, and multimodal regional transportation system including, but not limited to, pedestrian, bicycle, public transit, highway, rail, maritime and harbors, goods movement and aviation. The RTP must be action-oriented, fiscally-constrained, and pragmatic, considering both short-term (prior to 2020), mid-term (2021-35) and long-term (2036-2045) periods. The RTP must be an internally consistent document and includes a policy element, the SCS, an action element, and a financial element.

Pursuant to the Sustainable Communities and Climate Protection Act of 2008 (SB 375), the SCS is an integral part of the RTP. The SCS must identify areas within the region sufficient to house all the population of the region, including all economic segments of the population, over the course of the planning period of the RTP, taking into account net migration into the region, population growth, household formation, and employment growth. An SCS identifies a "forecasted development pattern" for the region, which is informed by the inventory of existing land use throughout the region, along with the identification of sites where future development can be located, while still reducing vehicle-miles traveled (VMT) and greenhouse gas (GHG) emissions. The law establishes an approach to ensure that cities, counties, and the public are involved in the development of regional plans to achieve targets set by the California Air Resources Board (CARB) for reducing GHG emissions. An SCS must also be consistent with the general plans of the region's jurisdictions. *The following are APCD comments that are pertinent to this project.*

Letter 2

1. Contact Person:

Andy Mutziger
Air Pollution Control District
3433 Roberto Court
San Luis Obispo, CA 93401
(805) 781-5912

2. Permit(s) or Approval(s) Authority:
Relative to projects that are implemented under the 2019 RTP-SCS, the APCD has construction and operational phase permit authority. For the construction phase, portable equipment, 50 horsepower (hp) or greater, used during construction activities may require California statewide portable equipment registration (issued by the California Air Resources Board (CARB)) or an APCD permit. Operational phase land uses may have emission sources that require APCD permits. A guide to equipment and operations that may have APCD permitting requirements can be found in the Technical Appendices, page 4-4, in the APCD's 2012 CEQA Handbook (http://www.slocleanair.org/rules-regulations/land-use-ceqa.php). This listing should not be viewed as exclusive. **To minimize potential delays, prior to the start of a project, project applicants will need to contact the APCD Engineering & Compliance Division at (805) 781-5912 for specific information regarding permitting requirements**.

3. Environmental Information:

The 2019 RTP-SCS under development has the potential for significant impacts to local air emissions, ambient air quality, sensitive receptors, and the implementation of the Clean Air Plan (CAP). An air quality conformity analysis should be included in the DEIR to adequately evaluate the overall air quality impacts associated with implementation of the RTP-SCS development scenarios. The following is an outline of items that should be included in the analysis:

a) A description of conformity requirements and of existing air quality and emissions in the impact area. This should include the attainment status of the APCD relative to State and Federal air quality standards and any existing regulatory restrictions to development. The most recent CAP should be consulted for applicable information and the APCD should be consulted to determine if there is more up to date information available.

b) As per SB375, the RTP-SCS needs to evaluate greenhouse gas (GHG) emissions reductions from future development scenarios focusing on urban infill relative to the baseline/business as usual scenario. This evaluation will be accomplished using the CARB EMFAC emissions model that was developed to assess California criteria and GHG emissions from on-road vehicles including cars, trucks, and buses. **For disclosure purposes, the APCD recommends that the RTP-SCS appendices include EMFAC results from all scenarios and that those results include not only GHG emissions, but also the criteria pollutants emissions from the scenarios**. All assumptions used should be fully documented in the EIR. Please contact the APCD Planning, Monitoring & Outreach Division at (805) 781-5912 if additional information and guidance is required.

Letter 2

c) A qualitative analysis of the air quality impacts of the future development scenarios should be conducted. A consistency analysis with the CAP will determine if the emissions resulting from the various RTP-SCS scenarios will be consistent with the emissions projected in the CAP, as described in item 6 of this letter. The qualitative analysis should be based upon criteria such as prevention of urban sprawl and reduced dependence on automobiles. A finding of Class I impacts could be determined qualitatively. The DEIR author should contact the APCD if additional information and guidance is required. All assumptions used should be fully documented in an appendix to the DEIR.

d) Mitigation measures to reduce or avoid significant air quality impacts should be recommended.

If you would like to receive a copy of an example of a recommended format for the qualitative analysis section on air emissions impacts, contact the APCD Planning, Monitoring & Outreach Division at (805) 781-5912.

4. Permit Stipulations/Conditions:

See Section 2.

5. Alternatives:

For the alternatives evaluation, the 2019 RTP-SCS includes future development scenarios focusing on urban infill relative to the baseline/business as usual scenario.

6. Reasonably Foreseeable Projects, Programs or Plans:

The most appropriate standard for assessing the significance of potential air quality impacts for the 2019 RTP-SCS EIR is to evaluate the consistency of the various development scenarios to the land use goals and policies in the Clean Air Plan and local Climate Action Plans. The rationale for requiring the preparation of a consistency analysis is to ensure that the Federal air quality attainment projections developed by the APCD and state requirements are met and maintained. Failure to comply with these plans could result in negative long term air quality impacts. Section 3.2 of the APCD's CEQA Air Quality Handbook provides guidance for preparing the consistency analysis.

7. Relevant Information:

As mentioned earlier, the Handbook should be referenced in the EIR for determining the significance of impacts and level of mitigation recommended.

8. Further Comments:

<u>APCD Support of 2019 RTP-SCS Urban Infill and Alterative Transportation Support</u>

Letter 2

The APCD encourages balance of residential and commercial infill within the existing County URL/VRLs, as this is consistent with the land use goals and policies of the APCD's Clean Air Plan (APCD CAP). Enabling residents the opportunity to live, work and shop within areas that utilize land use principles that reduce the need to drive and minimizes vehicle exhaust emissions which account for over 50% of the county's air pollution including greenhouse gas emissions. Increasing density can reduce trips and travel distances and encourage the use of alternative forms of transportation such as walking, bicycling and use of public transit services. **The APCD supports the urban infill scenarios that will be part of the RTP-SCS because they are consistent with the APCD CAP and the Conservation and Open Space Elements of the SLO County's General Plan and the Energy Wise Plan, both adopted by the SLO County Board of Supervisors.**

The APCD supports the efforts of the RTP-SCS for its guidance on meeting CARB's SB 375 GHG emission reduction targets for San Luis Obispo County. The RTP-SCS will also support Assembly Bill 32, California Global Warming Solutions Act (2006) which requires statewide GHG emissions to be reduced to 1990 levels by year 2020 and Senate Bill 32, California Global Warming Solutions Act of 2006: emissions limit (2016) which required statewide GHG emissions to be reduced to 40% below 1990 levels by year 2030.

Again, thank you for the opportunity to comment on this proposal. If you have any questions or comments, feel free to contact me at (805) 781-5912.

Sincerely,

Andy Mutziger
Air Quality Specialist

AJM/agj

H:\PLAN\CEQA\Project_Review\4000\4000\4059-1\4059-1.docx

Jeff Brubaker

Letter 3

From: Tamara Parent <tamara.parent@sanmiguelcsd.org>
Sent: Monday, February 5, 2018 12:51 PM
To: Jeff Brubaker
Subject: San Miguel CSD- PEIR

Jeff Brubaker-
Good afternoon, I informed the Board of Directors about the update to the PEIR RTP-SCS and they only had one thing. They would like to see lighting at the Park and Ride on 10th and K.
If you need more information please contact me.

Tamara Parent
Board Clerk/Account Clerk Manager
San Miguel Community Services District
805-467-3388
tamara.parent@sanmiguelcsd.org

Please visit our new website to learn more about the San Miguel C.S.D. sanmiguelcsd.org

Letter 4

Jeff Brubaker

From: Eugene H. Jud <ejud@calpoly.edu>
Sent: Friday, February 23, 2018 7:08 PM
To: Jeff Brubaker
Subject: Reg. Trsp. Plan 2019

Dear Mr. Brubaker,

Please consider using our underused Rail Corridor for **commuter rail** with **newest technology**, e.g. Swiss Stadler Rail, already operating in other parts of USA. This makes a lot of sense, and creative land use must adapt to this. Examples for smaller counties and cities exist.

The old rule, that commuter rail works only for areas over 200 000 people is dead. The Schiermeier report for our county (very old) does not at all apply any more.

Thank you

eugene jud

Eugene Jud, Fellow Institute of Transportation Engineers ITE
Faculty Emeritus Civil and Environmental Engineering
California Polytechnic State University: San Luis Obispo, CA 93407-0353
Phone: (805) 756-1729; E-mail: ejud@calpoly.edu; URLs: Several
Judcons /Private: 665 Leff Street, San Luis Obispo, CA 93401-4351
Phone: (805) 549-8185; E-mail: Jud4eugene@gmail.com

Letter 5

Jeff Brubaker

From: Fred Collins <fcollins@northernchumash.org>
Sent: Monday, January 22, 2018 8:58 AM
To: Jeff Brubaker
Subject: RE: Consultation for the SLOCOG 2019 Regional Transportation Plan and Sustainable Communities Strategy EIR

Good morning Jeff,

The Northern Chumash Tribal Council, Inc., would like to be consulted with all phases of the this project. NCTC has had one meeting on site and would like to be involved, thank you.

Fred Collins
Chair NCTC

From: Jeff Brubaker [mailto:JBrubaker@slocog.org]
Sent: Friday, January 19, 2018 2:03 PM
To: fcollins@northernchumash.org
Subject: Consultation for the SLOCOG 2019 Regional Transportation Plan and Sustainable Communities Strategy EIR

Mr. Collins,

Please see the attached consultation letter.

Let me know if you have any questions.

Jeff Brubaker, AICP
Transportation Planner
San Luis Obispo Council of Governments (SLOCOG)
805-788-2104

Letter 6

Jeff Brubaker

From: Mona Tucker <olivas.mona@gmail.com>
Sent: Thursday, February 8, 2018 5:32 PM
To: Jeff Brubaker
Subject: PEIR for the SLOCOG 2019 Regional Transportatio Plan & Sustainable Communities Strategy (RTP SCS)

Follow Up Flag: Follow up
Flag Status: Flagged

Hello Mr. Brubaker:

I received your letter dated Jan 19, 2018 and consultation will be needed for this extensive proposal. However, at this time, there isn't enough information to focus on specific sites in the numerous towns. However, I'm certain that on a project of this scale, the potential impacts to Northern Chumash sensitive sites will require a large amount of cultural and archaeological research to insure they are avoided.

I would like to recommend that you only use an archaeological firm that is experienced in the cultural materials of the Northern Chumash. A local firm would be preferred as they typically know more about our Northern Chumash sites than a firm who is not familiar with SLO County.

Thank you,

Mona Olivas Tucker, Chair
yak tityu tityu yak tilhini - Northern Chumash Tribe
San Luis Obispo County and Region

APPENDIX B: Mitigation Monitoring and Reporting Program (MMRP)

VOLUME II

APPENDIX C: 2019 Regional Transportation Plan (Public Review Draft)

Available for review online at: https://slocog.org/2019RTP

Or in print at:

- San Luis Obispo Council of Governments, 1114 Marsh St., San Luis Obispo Council, CA
- San Luis Obispo County Library, 995 Palm St, San Luis Obispo, CA
- Atascadero Public Library, 6555 Capistrano Ave, Atascadero, CA
- Paso Robles City Library, 1000 Spring St., Paso Robles, CA
- Morro Bay Library, 625 Harbor St, Morro Bay, CA
- Arroyo Grande Library, 800 W Branch St, Arroyo Grande, CA

APPENDIX D: BIOLOGICAL RESOURCES TABLES

County of San Luis Obispo General Plan Conservation and Open Space Element
May 2010

https://www.slocounty.ca.gov/getattachment/ba01754b-50ac-4c13-ba16-1a9eb9d56a01/Conservation-and-Open-Space-Element.aspx

TABLE D-1
SENSITIVE PLANT SPECIES POTENTIAL/KNOWN OCCURRENCES WITHIN SAN LUIS OBISPO COUNTY

Scientific Name	Common Name	Federal	State	CNPS	Habitat Description
Abies bracteata	bristlecone fir	None	None	1B.3	Santa Lucia Mountains. Found in moist canyon bottoms and rocky slopes where fuel accumulations do not permit fire.
Agrostis hooveri	Hoover's bent grass	None	None	1B.2	It is endemic to California, where it is known only from western San Luis Obispo and Santa Barbara Counties. It grows in woodland and chaparral in hilly terrain.
Allium hickmanii	Hickman's onion	None	None	1B.2	Flowering Mar--May. Grassy, wooded slopes and flats; of conservation concern; 0--50 m; Rare endemic of the Monterey Peninsula and San Luis Obispo County.
Allium howellii var. *clokeyi*	Mt. Pinos onion	None	None	1B.3	Sagebrush communities. Flowering May--Jun. Heavy clay soils, including serpentine; 1300--1900 m.
Arctostaphylos cruzensis	Arroyo de la Cruz manzanita	None	None	1B.2	This shrub is endemic to California, where it grows in the sand of the coastline in Monterey and San Luis Obispo Counties. The coastal sage scrub/coastal chaparral plant communities in which it lives also have *Ceanothus hearstiorum, Ceanothus thyrsiflorus, Ceanothus griseus, Adenostoma fasciculatum, Iris douglasii, Lonicera involucrata, Baccharis pilularis, Salvia mellifera, Toxicodendron diversilobum, Diplacus aurantiacus,* and *Lupinus arboreus* (among others).
Arctostaphylos hookeri ssp. *hearstiorum*	Hearst's manzanita	None	None	1B.2	This shrub is endemic to California, where it grows in the sand of the coastline in Monterey and San Luis Obispo Counties. The coastal sage scrub/coastal chaparral plant communities in which it lives also have *Ceanothus hearstiorum, Ceanothus thyrsiflorus, Ceanothus griseus, Adenostoma fasciculatum, Iris douglasii, Lonicera involucrata, Baccharis pilularis, Salvia mellifera, Toxicodendron diversilobum, Diplacus aurantiacus,* and *Lupinus arboreus* (among others).
Arctostaphylos luciana	Santa Lucia manzanita	None	None	1B.2	It is endemic to the Santa Lucia Mountains of San Luis Obispo County, California, where it grows in the chaparral of the coastal mountain slopes.
Arctostaphylos montereyensis	Monterey manzanita	None	None	1B.2	This is a plant of maritime chaparral which grows on sandy soils.
Arctostaphylos morroensis	Morro manzanita	T	None	1B.1	This shrub is endemic to California, where it is native to San Luis Obispo County in the vicinity of Morro Bay. is a plant of the sandy coastal cliffs and beach chaparral.
Arctostaphylos osoensis	Oso manzanita	None	None	1B.2	Endemic to San Luis Obispo County, California, where it is known from only two occurrences on the northern edge of the Los Osos Valley. This manzanita grows on sand or clay at the west end of San Luis Valley where it gets summer fog and rainfall of about 20-30 inches.
Arctostaphylos pechoensis	Pecho manzanita	None	None	1B.2	Endemic to California, where it is known only from the Pecho Hills southwest of San Luis Obispo. It is a plant of the chaparral and coastal coniferous forest.
Arctostaphylos pilosula	Santa Margarita manzanita	None	None	1B.2	Endemic to California, where it is known only from the coastal mountains of San Luis Obispo County, especially near Santa Margarita, and one occurrence in southern Monterey County. It grows in the chaparral. This is a bristly shrub growing between one and two meters tall.
Arctostaphylos rudis	sand mesa manzanita	None	None	1B.2	Endemic to California, where it is known only from the southern Central Coast. It is most abundant at Burton Mesa in the hills north of Lompoc, and there are a few occurrences remaining near Nipomo. It grows in chaparral and coastal sage scrub on sandy soils.

Scientific Name	Common Name	Federal	State	CNPS	Habitat Description
Arctostaphylos tomentosa ssp. *daciticola*	dacite manzanita	None	None	1B.1	Chaparral, Foothill Woodland
Arctostaphylos wellsii	Wells's manzanita	None	None	1B.1	This manzanita grows in the Arroyo Grande, San Luis Obispo, Availa area on sandstone, and sand on hardpan.
Arenaria paludicola	marsh sandwort	E	E	1B.1	The plant grows in wet areas, such as marsh and bog. Flowering late spring-summer.
Aristocapsa insignis	Indian Valley spineflower	None	None	1B.2	Occurs in sandy soils in cismontane woodland. Less than 10 known populations from Monterey and San Luis Obispo Counties between 300–600 meters (m) in elevation. Blooms May–September.
Astragalus didymocarpus var. *milesianus*	Miles's milk-vetch	None	None	1B.2	Coastal Sage Scrub, Valley Grassland, Creosote Bush Scrub, Southern Oak Woodland, Joshua Tree Woodland. Elevation: between 0 and 4400 feet
Atriplex coulteri	Coulter's saltbush	None	None	1B.2	It grows in areas of saline and alkaline soils, such as ocean bluffs. This is a perennial herb producing leaning or erect reddish green stems and branches generally under 50 centimeters tall. Flowering spring-fall.
Atriplex cordulata	heartscale	None	None	1B.2	Occurs on saline or alkaline soils.
Atriplex joaquiniana	San Joaquin spearscale	None	None	1B.2	Alkali sink scrub or alkaline grasslands; 0-200(-300) m; Flowers in summer.
Atriplex serenana var. *davidsonii*	Davidson's saltscale	None	None	1B.2	Alkaline sinks and drainages; 10-500 m; Flowers in the spring/fall.
Atriplex vallicola	Lost Hills crownscale	None	None	1B.2	Typically grows in the dried beds of alkaline pools within scrub or annual grassland communities; Flowers from May to August.
Baccharis plummerae ssp. *glabrata*	San Simeon baccharis	None	None	1B.2	Chaparral, Foothill Woodland, Mixed Evergreen Forest, Coastal Sage Scrub.
Blepharizonia plumosa	big tarplant	None	None		Dry grassy areas.
Bloomeria humilis	dwarf goldenstar	None	None	1B.2	Endemic to San Luis Obispo County, California, where it is known from only one occurrence on the coastline near San Simeon. It is a plant of the local chaparral and coastal grassland.
Calochortus clavatus var. *recurvifolius*	Arroyo de la Cruz mariposa lily	None	None	1B.2	Calochortus clavatus var. recurvifolius is restricted to the southern outer Coast Range north of Arroyo de la Cruz, San Luis Obispo County. Flowering late spring--mid summer.
Calochortus obispoensis	San Luis mariposa lily	None	None	1B.2	Endemic to San Luis Obispo County, California, where it grows in the chaparral of the coastal mountains, generally on serpentine soils.
Calochortus palmeri var. *palmeri*	Palmer's mariposa lily	None	None	1B.2	Meadows, vernally moist places in pine forest and chaparral; of conservation concern; 1200--2200 m; Flowering late spring--mid summer.
Calochortus simulans	San Luis Obispo mariposa lily	None	None	1B.3	Grasslands to pine forest; Flowering late spring--mid summer.
Calochortus weedii var. *vestus*	late-flowered mariposa lily	None	None	1B.2	Dry slopes in openings in coastal woodland and chaparral; 0--900 m. Flowering mid summer.

Scientific Name	Common Name	Federal	State	CNPS	Habitat Description
Calycadenia villosa	dwarf calycadenia	None	None	1B.1	Occurs in open, dry areas within grassland seeps, meadows, hillsides, gravelly outwashes of cismontane woodland or chaparral between 240–1,350 m in elevation. Blooms May–October.
Calyptridium parryi var. *hesseae*	Santa Cruz Mountains pussypaws	None	None	1B.1	Chaparral and cismontane woodland habitats.
Calystegia subacaulis ssp. *episcopalis*	Cambria morning-glory	None	None	1B.2	Full sun to part shade, coastal sage scrub/chaparral/ oak woodland, clay/ serpentine soil, some associates are *Bloomeria crocea, Calochortus argillosus, Hordeum brachyantherum* ssp. *californicum, Hemizonia congesta* ssp. *luzulifolia*, deciduous in summer.
Camissonia hardhamiae	Hardham's evening-primrose	None	None	1B.2	Occurs in decomposed carbonate of chaparral, cismontane woodland, closed-cone coniferous forest, and coastal scrub between 140–610 m in elevation. Blooms April–May. There are 10 documented occurrences of this species in southern Monterey and northern San Luis Obispo Counties.
Carex obispoensis	San Luis Obispo sedge	None	None	1B.2	Central Coast region of San Luis Obispo County on serpentine soils below 600 m elevation. Only known from Sycuan and McGinty Peaks in San Diego County.
Castilleja densiflora ssp. *obispoensis*	Obispo Indian paintbrush	None	None	1B.2	Valley and foothill grasslands between 10–400 m in elevation. Blooms March–May.
Caulanthus californicus	California jewel-flower	E	E	1B.1	California jewelflower is found in several plant communities, including Non-native grassland, Upper Sonoran Subshrub Scrub, and Cismontane Juniper Woodland and Scrub.
Caulanthus coulteri var. *lemmonii*	Lemmon's jewelflower	None	None	1B.2	Occurs in pinyon-juniper woodland, chaparral, and valley and foothill grassland between 80–1,220 m in elevation, particularly on clay soils. Blooms March– May.
Ceanothus hearstiorum	Hearst's ceanothus	None	None	1B.2	Found in coastal sage scrub plant community with *Ceanothus hearstiorum, C. thyrsiflorus, C. griseus, Adenostoma fasciculatum, Iris douglasiana, Lonicera involucrata, some Pinus radiata (in the closed cone pine forest), Baccharis pilularis, Salvia mellifera, Rhamnus californica, Heteromeles arbutifolia, Toxicodendron, Diplacus aurantiacus* and *Lupinus arboreus*(among others).
Ceanothus maritimus	maritime ceanothus	None	None	1B.2	Endemic to San Luis Obispo County, California, where it is known from only a few occurrences in the vicinity of Hearst Ranch. It shares the same range as the similarly rare *Ceanothus hearstiorum*, growing on the coastal bluffs.
Centromadia parryi ssp. *congdonii*	Congdon's tarplant	None	None	1B.2	Grassland. Elevation 3.2 - 736 feet. Blooms June - November.
Chlorogalum pomeridianum var. *minus*	dwarf soaproot	None	None	1B.2	Valley Grassland, Coastal Sage Scrub, Northern Coastal Scrub, Foothill Woodland, Closed-cone Pine Forest, Mixed Evergreen Forest, Chaparral.
Chlorogalum purpureum var. *purpureum*	purple amole	T - CH	None	1B.1	Cismontane woodlands, chaparral, and grasslands between 205–350 m in elevation. Endemic to sparsely vegetated less disturbed clay soils often with cryptogammic crusts or gravelly surfaces. Blooms April–June. Critical habitat for this species occurs within San Luis Obispo and Monterey Counties.
Chlorogalum purpureum var. *reductum*	Camatta Canyon amole	T	R	1B.1	Valley Grassland, Coastal Sage Scrub, Northern Coastal Scrub, Foothill Woodland, Closed-cone Pine Forest, Mixed Evergreen Forest, Chaparral.

Scientific Name	Common Name	Federal	State	CNPS	Habitat Description
Chorizanthe breweri	Brewer's spineflower	None	None	1B.3	Endemic to California, where it is known from about twenty occurrences in the Central Coast Ranges of San Luis Obispo and far southern Monterey Counties.[1] It grows in the chaparral and woodlands of the range, generally on serpentine soils.
Chorizanthe pungens var. *pungens*	Monterey spineflower	T- CH	None	1B.2	Chaparral, Foothill Woodland, Northern Coastal Scrub, Coastal Sage Scrub and Costal Dunes
Chorizanthe rectispina	straight-awned spineflower	None	None	1B.3	Often found in granite of cismontane woodlands, chaparral, and coastal scrub between 85–1,035 m in elevation in Monterey, San Luis Obispo, and Santa Barbara Counties. Blooms May to July.
Cirsium fontinale var. *obispoense*	Chorro Creek bog thistle	E	E	1B.2	Occurrences appear limited to serpentine seeps and streams.
Cirsium loncholepis	La Graciosa thistle	E - CH	T	1B.1	It is endemic to California, where it is known from about 15 remaining occurrences in wetlands where southwestern San Luis Obispo County borders northwestern Santa Barbara County. It grows in coastal scrub and sand dunes, marshes, and moist grasslands in the watersheds of local rivers, including the Santa Maria River. It is a federally listed endangered species.
Cirsium occidentale var. *compactum*	compact cobwebby thistle	None	None	1B.2	It is found close to the coast from Cambria northward in San Luis Obispo county. Blooms April-June.
Cirsium rhothophilum	surf thistle	None	T	1B.2	It is endemic to California, where it is known only from the coastline around the border between San Luis Obispo and Santa Barbara Counties. It grows in sand dunes and coastal scrub near the beach.
Cladium californicum	California saw-grass	None	None	2.2	It is native to the southwestern United States and northern Mexico where it grows in moist areas in a number of habitat types, often in alkaline soils.
Clarkia speciosa ssp. *immaculata*	Pismo clarkia	E	R	1B.1	Endemic to California, where it is known from the Central Coast and mountains and from the Sierra Nevada foothills. There are four subspecies of this plant. One, ssp. *immaculata* (also sometimes called var. i*mmaculata*), is known as the Pismo clarkia and is federally listed as an endangered species. It is known from about 20 occurrences on the coastline of San Luis Obispo County near Pismo Beach.
Cordylanthus maritimus ssp. *maritimus*	salt marsh bird's-beak	E	E	1B.2	This is a halophyte which grows in areas of high salt concentrations, including coastal salt marshes and the inland salt flats.
Deinandra halliana	Hall's tarplant	None	None	1B.1	Clay soils of floodplains. Adobe flats and serpentine. Elevation 960 - 3040 feet. Blooms April - May.
Deinandra increscens ssp. *foliosa*	leafy tarplant	None	None	1B.2	Occurs in valley and foothill grasslands in Santa Barbara and San Luis Obispo Counties. It is common from Morro Bay southward in coastal areas in clay loams or mostly sandy soils.
Delphinium parryi ssp. *blochmaniae*	dune larkspur	None	None	1B.2	Chaparral (maritime), coastal dunes, sand: Endemic to the Nipomo dunes of southern San Luis Obispo.
Delphinium recurvatum	recurved larkspur	None	None	1B.2	Endemic to grasslands of California, where most of its historical range is in the Central Valley.
Delphinium umbraculorum	umbrella larkspur	None	None	1B.3	Mesic sites in cismontane woodlands between 400– 1,600 m. Blooms April–June.

Scientific Name	Common Name	Federal	State	CNPS	Habitat Description
Dithyrea maritima	beach spectaclepod	None	T	1B.1	This is the only species of the genus in the coastal dunes. Blooms March-May.
Dudleya abramsii ssp. *bettinae*	Betty's dudleya	None	None	1B.2	Endemic to the coastal serpentine of San Luis Obispo County, California.
Dudleya abramsii ssp. *murina*	San Luis Obispo dudleya	None	None	1B.3	Endemic to the coastal serpentine of San Luis Obispo County, California.
Dudleya blochmaniae ssp. *blochmaniae*	Blochman's dudleya	None	None	1B.1	Coastal California.
Entosthodon kochii	Koch's cord-moss	None	None	1B.3	River banks on newly exposed soil; moderate elevations.
Eriastrum luteum	yellow-flowered eriastrum	None	None	1B.2	This wildflower is endemic to California where it is known only from Monterey and San Luis Obispo Counties. On dry slopes.
Erigeron blochmaniae	Blochman's leafy daisy	None	None	1B.2	This wildflower is endemic to California, where it is limited to the coastline of San Luis Obispo and northern Santa Barbara Counties. It lives in sand dunes and coastal hillsides, habitat which is currently declining as it is claimed for development.
Eriodictyon altissimum	Indian Knob mountainbalm	E	E	1B.1	Endemic to San Luis Obispo County, California, where it is known from only about six occurrences in the Irish Hills on the coast and nearby Indian Knob. It grows in scrub, oak woodland, and chaparral habitat on sandstone soils.
Eriogonum temblorense	Temblor buckwheat	None	None	1B.2	Temblor buckwheat typically occurs on slopes of white, shattered shale and occasionally on sandstone. The shale areas are dry and nearly barren of other vegetation, but California buckwheat (*Eriogonum fasciculatum*), sun cups (*Camissonia californica*), and Booth's evening-primrose (*C. boothii*) may be present.
Erodium macrophyllum	round-leaved filaree	None	None		Cismontane woodlands and grasslands on clay soils between 15–1,200 m in elevation. Blooms March–May.
Eryngium aristulatum var. *hooveri*	Hoover's button-celery	None	None	1B.1	Occurs in vernal pools. Locally found only around Laguna Lake near San Luis Obispo. Blooms in July.
Eschscholzia rhombipetala	diamond-petaled California poppy	None	None	1B.1	Grasslands, often associated with vernal pools.
Fritillaria ojaiensis	Ojai fritillary	None	None	1B.2	This wildflower is endemic to central California, where it is known from very few occurrences in the central Coast Ranges.
Fritillaria viridea	San Benito fritillary	None	None	1B.2	Endemic to the Central Coast Ranges of California, where it is an uncommon member of the chaparral and serpentine soils flora.
Galium californicum ssp. luciense	Cone Peak bedstraw	None	None	1B.3	Foothill Woodland, Yellow Pine Forest, Mixed Evergreen Forest
Galium hardhamiae	Hardham's bedstraw	None	None	1B.3	Endemic to the Santa Lucia Range of southern Monterey and northern San Luis Obispo Counties in California. It is a member of the serpentine soils flora in these coastal mountains.

Scientific Name	Common Name	Federal	State	CNPS	Habitat Description
Horkelia cuneata ssp. *puberula*	mesa horkelia	None	None	1B.3	Coastal Strand, Closed-cone Pine Forest, Foothill Woodland, Northern Coastal Scrub, Chaparral, Coastal Sage Scrub
Horkelia cuneata ssp. *sericea*	Kellogg's horkelia	None	None	1B.1	Occurs in openings of coastal sandhills, old dunes, closed-cone coniferous forest, coastal scrub, and chaparral between 10–200 m in elevation. Blooms April–September.
Juncus luciensis	Santa Lucia dwarf rush	None	None	1B.2	Wet, sandy soils of seeps, meadows, vernal pools, streamsides.
Lasthenia glabrata ssp. *coulteri*	Coulter's goldfields	None	None	1B.1	Resident of vernal pools and other moist areas in a number of habitat types.
Lasthenia californica ssp. *macrantha*	perennial goldfields	None	None	1B.2	Northern Coastal Scrub, Coastal Sage Scrub, Coastal Prairie, Northern Oak Woodland, Valley Grassland, Foothill Woodland.
Layia heterotricha	pale-yellow layia	None	None	1B.1	Occurs in alkaline or clay soils of cismontane woodlands, coniferous woodlands, and grasslands between 300–1,705 m in elevation. Blooms March–June. Considered extirpated from San Luis Obispo County.
Layia jonesii	Jones's layia	None	None	1B.2	Endemic to California, where it is known only from coastal San Luis Obispo County. It grows on clay and serpentine soils.
Layia munzii	Munz's tidy-tips	None	None	1B.2	Endemic to the San Joaquin Valley in California, where it has been eliminated from most of its native range by the conversion of valley land to agriculture. A sizable population still exists on the grasslands of the Carrizo Plain.
Lembertia congdonii	San Joaquin woollythreads	E	None	1B.2	Annual herb of the aster family (Asteraceae). Inhabits chenopod scrub as well as valley and foothill grasslands. This species is generally found in alkaline or loamy plains or in sandy soils accompanied with grasses. Range includes San Benito county. Blooming period: February – May; Elevation: 60 - 800 meters
Lepidium jaredii ssp. *album*	Panoche pepper-grass	None	None	1B.2	Panoche peppergrass occurs in dry stream beds, on alluvial fans, and on slopes. Associated species include a variety of grasses and forbs as well as the shrubs common saltbush, quailbush (*Atriplex lentiformis*), mulefat (*Baccharis salicifolia*), and scale-broom (*Lepidospartum squamatum*).
Lepidium jaredii ssp. *jaredii*	Jared's pepper-grass	None	None	1B.2	Occurs in sandy, alkaline, or adobe soils of flats and sinks within valley and foothill grasslands between 335– 1,005 m in elevation. Blooms March–May.
Lupinus ludovicianus	San Luis Obispo County lupine	None	None	1B.2	Found on sandstone or sand of the Santa Margarita formation from just east of Indian Knob on the west to 1.5 miles east of Huasna School Road on the east and 4 miles north of Pozo on the north. Blooms April-July.
Lupinus nipomensis	Nipomo Mesa lupine	E	E	1B.1	Endemic to the Guadalupe-Nipomo Dunes on the California Central Coast. Specifically, the plant is limited to the Guadalupe Dunes at the southern border of San Luis Obispo County. There are five to seven colonies growing in a strip of sand dunes measuring less than three square miles in area
Madia radiate	showy madia	None	None	1B.1	Cismontane woodland, valley and foothill grassland, from 25-900 meters. Blooms Mar. - May .
Malacothamnus davidsonii	Davidson's bush mallow	None	None	1B.2	Coastal scrub, riparian woodland, chaparral; sandy washes between 185–855 m in elevation. Blooms June– January.
Malacothamnus palmeri var.	Carmel Valley bush mallow	None	None	1B.2	Chaparral, Foothill Woodland

Scientific Name	Common Name	Federal	State	CNPS	Habitat Description
involucratus					
Malacothamnus palmeri var. *palmeri*	Santa Lucia bush mallow	None	None	1B.2	Chaparral
Malacothrix saxatilis var. *arachnoidea*	Carmel Valley malacothrix	None	None	1B.2	Rock outcrops and steep rocky road cuts in chaparral between 25–335 m in elevation. Blooms June– December.
Microseris paludosa	marsh microseris	None	None	1B.2	Endemic to California, where it has a scattered distribution between southern Mendocino and northern San Luis Obispo Counties, mainly near the coast. Its habitat includes coastal scrub and grassland and coniferous forest.
Monardella crispa	crisp monardella	None	None	1B.2	Endemic to California, where it is known only from the sand dunes on the coastline of San Luis Obispo and Santa Barbara Counties.
Monardella frutescens	San Luis Obispo monardella	None	None	1B.2	Endemic to California, where it is known only from the sand dunes and scrub on the coastline of San Luis Obispo and Santa Barbara Counties.
Monardella palmeri	Palmer's monardella	None	None	1B.2	Endemic to California, where it is known only from the coastal mountain ranges of Monterey and San Luis Obispo Counties. It grows in local habitat types such as chaparral and forest, often on serpentine soils.
Monolopia congdonii	San Joaquin woollythreads	E	None	1B.2	It is found in sandy, often alkaline plains from Fresno southward to Kern county in the San Joaquin Valley and on the southern Carriza Plain. It is found in at least one location in the Cuyama Valley in northern Santa Barbara county. Blooms February-May.
Nasturtium gambelii	Gambel's water cress	E	T	1B.1	Marshes and swamps.
Navarretia fossalis	spreading navarretia	T	None	1B.1	Known only from vernally wet areas, such as vernal pools, ditches, and other areas that are wet or flooded during the rainy season and dry the rest of the year. Many of these habitat areas have alkali soils arranged in uneven mounds and depressions that collect water and drain slowly before drying up.
Navarretia nigelliformis ssp. *radians*	shining navarretia	None	None	1B.2	Swales and seasonal wetland edges in cismontane woodlands and valley and foothill grasslands, between 90–1,000 m in elevation. Blooms May–July.
Navarretia prostrata	prostrate navarretia	None	None	1B.1	Vernal pools on alkaline soils in coastal scrub and grasslands between 15–700 m in elevation. Blooms April–July.
Pedicularis dudleyi	Dudley's lousewort	None	R	1B.2	Endemic to central California, where it is known from about ten scattered occurrences along the coast and in the coastal mountain ranges. It is a resident of forest and chaparral habitat.
Pinus radiate	Monterey pine	None	None	1B.1	It is a species of pine native to coastal California in three very limited areas in Santa Cruz, Monterey and San Luis Obispo Counties.
Plagiobothrys uncinatus	hooked popcorn-flower	None	None	1B.2	Chaparral, cismontane woodland, grasslands, and coastal bluff scrub between 300–760 m in elevation. Blooms April–May.
Poa diaboli	Diablo Canyon blue grass	None	None	1B.2	Annual grasslands.
Rorippa gambellII	Gambel's watercress	E	T	1B.1	Aquatic, herbaceous perennial, producing floating and emergent stems. Flowering ranges from April through July.

Scientific Name	Common Name	Federal	State	CNPS	Habitat Description
Sanicula maritima	adobe sanicle	None	R	1B.1	Coastal prairie and serpentine bunchgrass grasslands on coastal marine terraces.
Scrophularia atrata	black-flowered figwort	None	None	1B.2	Occurs in closed-cone coniferous forest, chaparral, coastal dunes, coastal scrub, and riparian scrub habitats in Santa Barbara and San Luis Obispo Counties. It has been reported around Mallagh's Landing just east of Avila, and hills bordering San Luis Valley on the south to western Santa Barbara County.
Senecio aphanactis	rayless ragwort	None	None	2.2	Foothill Woodland, Northern Coastal Scrub, Coastal Sage Scrub.
Sidalcea hickmanii ssp. *anomala*	Cuesta Pass checkerbloom	None	R	1B.2	Open rocky slopes and talus composed of serpentine, sometimes near abandoned mine spoils and near roads, in chaparral and at the margins of cypress woodlands. Common associates include *Quercus durata, Arctostaphylos obispoensis, Ceanothus* spp., and *Cupressus sargentii.*
Sidalcea hickmanii ssp. *Parishii*	Parish's checkerbloom	C	R	1B.2	Chaparral, Yellow Pine Forest.
Streptanthus albidus ssp. *peramoenus*	most beautiful jewel-flower	None	None	1B.2	Foothill Woodland, Chaparral.
Stylocline masonii	Mason's neststraw	None	None	1B.1	Annual grassland.
Suaeda californica	California seablite	E	None	1B.1	Coastal dunes, coast bluffs.
Sulcaria isidiifera	splitting yarn lichen	None	None	None	Within coastal scrub, it is not specific, appearing on *Adenostoma fasciculatum, Quercus dumosa, Quercus agrifolia, Ceanothus ramulosus*, and unidentified shrubs.
Symphyotrichum defoliatum	San Bernardino aster	None	None	1B.2	Endemic to southern California, where it is known only from the San Bernardino and San Gabriel Mountains and part of the Peninsular Ranges to the south. It grows in grassland and meadow habitat and in disturbed areas.
Trifolium depauperatum var. *hydrophilum*	saline clover	None	None	1B.2	Valley Grassland, Mixed Evergreen Forest, wetland-riparian.
Triteleia ixioides ssp. *cookie*	Cook's triteleia	None	None	1B.3	Occurs in stream sides, wet ravines, and moist places, often in serpentine soils of cismontane woodland and closed-cone coniferous forests between 150–700 m in elevation. Blooms May–June.
Tropidocarpum capparideum	caper-fruited tropidocarpum	None	None	1B.1	Alkaline valley and foothill grasslands.
Viola aurea	golden violet	None	None	2.2	Alkaline valley and foothill grasslands.

Source: San Luis Obispo County CNDDB and USFWS County list database queried on February 3, 2010
Notes:
Federal: T = threatened, E = endangered, C = candidate CH = Critical Habitat has been designated for the species within the county
State: T = threatened, E = endangered, R = rare
California Native Plant Society (CNPS):
List 1B = rare, threatened, endangered, in California and elsewhere.
List 2 = rare, threatened, or endangered in California, but more common elsewhere.
.1 - Seriously endangered in California (over 80% of occurrences threatened / high degree and immediacy of threat)
.2 – Fairly endangered in California (20-80% occurrences threatened)
.3 – Not very endangered in California (<20% of occurrences threatened or no current threats known)

TABLE D-2
SENSITIVE ANIMAL SPECIES POTENTIAL/KNOWN OCCURRENCES WITHIN SAN LUIS OBISPO COUNTY

Scientific Name	Common Name	Federal	State	CDFG	Habitat Description
Accipiter cooperii	Cooper's hawk	None	None	SC	Nests in densely-canopied trees from foothill oak woodlands up to ponderosa pine forests. Nesting usually occurs in a deciduous tree near open water or riparian vegetation. Breeds March to August.
Accipiter striatus	sharp-shinned hawk	None	None	SC	Nests in dense coniferous forests and dense live oak woodlands.
Agelaius tricolor	tricolored blackbird	None	None	SC	Nests in freshwater marshes with tules or cattails, or in other dense vegetation such as thistle, blackberry thickets, etc., in close proximity to open water. Forages in a variety of habitats including pastures, agricultural fields, rice fields, and feedlots.
Ambystoma californiense	California tiger salamander	T - CH	None	SC	Occurs primarily in open habitats such as grasslands and prairies. Seasonal ponds and pools are essential for breeding and egg-laying.
Ammodramus savannarum	Grasshopper sparrow	None	None	SC	Inhabits grassland/herbaceous, old field, and savanna. Prefers grasslands of intermediate height and are often associated with clumped vegetation interspersed with patches of bare ground for breeding habitat. Other habitat requirements include moderately deep litter and sparse coverage of woody vegetation.
Ammospermophilus nelsoni	Nelson's antelope squirrel	None	T	None	Inhabits desert, grassland/herbaceous areas. Habitat consists of dry, flat or rolling terrain, with slopes less than 10-14 degrees. Often found in grassy, sparsely, shrubby ground and also occurs in areas lacking shrubs where giant kangaroo rats (Dipodomys ingens) are present. Habitats in order of decreasing favorability: 1.) xerophytic stage of alkali desert scrub with shrubs sparsely distributed and with friable soils at elevations greater than 4,000 feet, 2.) annual grassland with less than 6 inches annual precipitation, friable soils, and abundance of giant kangaroo rat, 3.) halophytic stage of alkali desert scrub with shrubs sparsely distributed and with friable soils, at elevations above 2,200 feet, and 4.) annual grassland with 7-9 inches of annual precipitation and abundance of Heermann's kangaroo rat (Dipodomys heermanni).
Anniella pulchra nigra	black legless lizard	None	None	SC	Typically occurs in moist loose soil associated with drainages and valley bottoms of open grassland and scrub habitats. A burrowing species seldom seen unless uncovered.
Anniella pulchra pulchra	silvery legless lizard	None	None	SC	Typically occurs in moist loose soil associated with drainages and valley bottoms of open grassland and scrub habitats. A burrowing species seldom seen unless uncovered.
Antrozous pallidus	pallid bat	None	None	SC	Roosts under bridges and in large culverts, buildings, and tree hollows associated with a variety of open, dry habitats.
Aquila chrysaetos	golden eagle	Bald and Golden Eagle Protection Act	None	SC	A large raptor. Found generally in open country including prairies, arctic and alpine tundra, open wooded country, and barren areas, especially in hilly or mountainous regions. Nests on rock ledge of cliff or in large tree (e.g., oak or eucalyptus in California). Pair may have several alternate nests. Egg dates: peak late February-March, California to Texas (but earlier nesting may yield young ready to fly as early as March 1 in Texas).
Asio otus	long-eared owl	None	None	SC	Riparian bottomlands grown to tall willows and cottonwoods. Also occurs in belts of live oak paralleling stream courses. Also found in dense conifer stands at higher elevations. Sedentary on territories. Breeds April-July.

Scientific Name	Common Name	Federal	State	CDFG	Habitat Description
Athene cunicularia	burrowing owl	None	None	SC	Uses burrows for refuge and breeding in relatively open, dry, annual or perennial grasslands. Burrowing owls may use a site for breeding, wintering, foraging, and/or migration stopovers. Burrowing owls exhibit site fidelity, reusing burrows year after year.
Branchinecta longiantenna	longhorn fairy shrimp	E - CH	None	None	Occurs in freshwater vernal pools of grasslands in the Central Valley and Central Coast foothills
Branchinecta lynchi	vernal pool fairy shrimp	T- CH	None	None	Occurs in freshwater vernal pools of grasslands in the Central Valley and Central Coast foothills.
Bufo californicus	Arroyo toad	E- CH	None	None	Prefers sandy or cobbly washes with swift currents and associated upland and riparian habitats.
Buteo regalis	ferruginous hawk	None	None	SC	Ferruginous hawks are birds of open country. They are found in open habitats, such as grasslands, sagebrush, deserts, shrublands, and outer edges of pinyon-pine and other forests. They select rocky outcrops, hillsides, rock pinnacles, or trees for nest sites.
Charadrius alexandrinus nivosus	western snowy plover	T - CH	None	SC	Sandy beaches, salt pond levees; needs sandy, gravelly, or friable soils for nesting.
Charadrius montanus	mountain plover	None	None	SC	Nonbreeding habitat in California. Preferred habitat consists of short-grass plains and fields, plowed fields and sandy deserts, and commercial sod farms. In southern California, wintering birds preferred heavily grazed native rangelands; they used burned fields primarily for night roosting. Alkali flats were the most favored habitat, where available; the use of cultivated land may be a result of loss of native habitats; native habitats may be critical in fall before freshly cultivated fields become available. Breed mid-March to late-July.
Coccyzus americanus occidentalis	western yellow-billed cuckoo	C	E	None	California breeding range is restricted to the Sacramento Valley, the South Fork of the Kern River, the Lower Colorado River Valley, and sometimes the Prado Basin in Riverside and San Bernardino Counties. Most recent Sacramento Valley records are from the Sacramento River from Todd Island in Tehama County south to Colusa State Park in Colusa County; the Feather River in Yuba and Sutter Counties. Breed in broad, well-developed, low-elevation riparian woodlands. Egg laying occurs from mid-June to mid-July.
Coelus globosus	globose dune beetle	None	None	None	It occurs at scattered dune localities from Mendocino County, California to Ensenada, Baja California, Mexico. Major populations occur at the Point Reyes Peninsula (Mann County), Santa Cruz (Santa Cruz County), Monterey Bay (Monterey County), Pismo Beach and Morro Bay (San Luis Obispo County). Despite the beetle's extensive geographic range along the Pacific Coast, throughout most of its range GDB is restricted to foredunes immediately bordering the sea. At many locations, the foredunes, which are usually a narrow band of open or sparsely vegetated loose sand, generally extend no more than approximately 50 meters inland from the mean high tide line. This flightless beetle spends nearly its entire life burrowing in loose sandy areas where common dune plants such as Sand Verbena (Abronia maritima: Nyctaginaceae), Beach Burr (Ambrosia chamissonis: Compositae), and Sea Rocket (Cakile maritima: Cruciferae) grow.
Corynorhinus townsendii	Townsend's big-eared bat	None	None	SC	Roosts under bridges and in large culverts, buildings, and tree hollows associated with a variety of habitat types. Very sensitive to disturbance of roosting sites.
Cypseloides niger	black swift	None	None	SC	The bird is found from northern British Columbia in Canada through the United States and Mexico to Costa Rica. Their breeding habitat is frequently associated with water. The birds most often nest on high cliff faces, either above the ocean surf or behind or next to waterfalls. The nest is made of

Scientific Name	Common Name	Federal	State	CDFG	Habitat Description
					twigs and moss glued together with mud.
Danaus plexippus	monarch butterfly	T	None	None	Habitat is a complex issue for this species. In general breeding areas are virtually all patches of milkweed in North America and some other regions. The critical conservation feature for North American populations is the overwintering habitats, which are certain high altitude Mexican conifer forests or coastal California conifer or Eucalyptus groves as identified in literature. Coastal regions are important flyways and so nectar (wild or in gardens) is an important resource in such places. However, essential overwintering areas for North American populations are limited to about 100 places in coastal California and the mountains of Mexico.
Dipodomys heermanni morroensis	Morro Bay kangaroo rat	E - CH	E	None	Primarily inhabit dry, gravelly valley grasslands and open chaparral. They may also occur in open foothill woodlands and the lower and upper Sonoran life zones. They prefer sparsely vegetated areas with loosely textured soil. When inactive, they occupy an underground burrow, within which young are born in a nest. Kangaroo rats may dig burrows from the shelter of ground squirrel burrows.
Dipodomys ingens	giant kangaroo rat	E	E	None	This species inhabits annual grasslands on the western side of the San Joaquin Valley. Marginal habitat for this species includes alkali scrub. This species requires level terrain and sandy loam soils for burrowing.
Dipodomys nitratoides brevinasus	Short-nosed kangaroo rat	None	None	SC	Short-nosed kangaroo rats generally occupy grassland with scattered shrubs and desert-shrub associations on friable soils. They inhabit highly saline soils around Soda Lake, on the Carrizo Plain, and less saline soil elsewhere.
Dipodomys nitratoides nitratoides	Tipton kangaroo rat	E	E	None	This species occupies saltbrush scrub and sink scrub communities in the Tulare Lake Basin of the southern San Joaquin Valley. This species inhabits soft friable soils, which do not seasonally flood. Generally, this species digs burrows in elevated soil mounds at the bases of shrubs.
Emys (=Clemmys) marmorata pallida	southwestern pond turtle	None	None	SC	Permanent or nearly permanent water in various habitats (e.g. ponds, streams, perennial drainages). Requires basking sites particularly in areas vegetated with riparian habitats. The western pond turtle includes two subspecies, the northwestern pond turtle (A. marmorata marmorata) and the southwestern pond turtle (A. marmorata pallida). The two subspecies range is interconnected within and around the San Francisco Bay Area.
Enhydra lutris nereis	Southern sea otter	T	None	None	Sea otters are marine mammals. They inhabit temperate coastal waters with rocky or soft sediment ocean bottoms less than 1 km from shore. Kelp forest ecosystems are characteristic of otter habitats. This species is found off the coast of central California.
Eremophila alpestris actia	California horned lark	None	None	SC	A widespread occupant of open habitats across North America, horned larks prefer areas with sparse vegetation and exposed soil. In western North America, this species is associated with desert brushlands, grasslands, and similar open habitats, as well as alpine meadows. Throughout their range, horned larks avoid all habitats dominated by dense vegetation and become scarce and locally distributed in heavily forested areas.
Eucyclogobius newberryi	tidewater goby	E - CH	None	SC	Historically widespread in brackish coastal lagoons and coastal creeks in California from the mouth of the Smith River, Del Norte County, south to Agua Hedionda Lagoon, San Diego County. Naturally absent (due to lack of suitable habitat) between Humboldt Bay and Ten Mile River, between Point Arena and Salmon Creek, and between Monterey Bay and Arroyo del Oso.
Eumops perotis	western mastiff bat	None	None	SC	Occurs in a variety of arid to semi-arid habitats, including grasslands. Roosts in crevices in cliffs,

Scientific Name	Common Name	Federal	State	CDFG	Habitat Description
californicus					rock outcrops, and caves. Will occasionally utilize trees as roost sites.
Euphilotes battoides allyni	El Segundo blue butterfly	E	None	None	Stabilized dune systems on the host plant coastal buckwheat (*Eriogonum*).
Euphilotes enoptes smithi	Smith's blue butterfly	E	None	None	Tied closely to two species of buckwheat (*E. latifolium* and *E. parviolium*).
Euproserpinus euterpe	Kern primrose sphinx moth	T	None	None	Various plants in the vicinity of the evening primrose host plants (*Camissonia contorta epilobiodes* or *Camissonia campestris*).
Falco mexicanus	Prairie falcon	None	None	None	Prairie falcons are sandy-colored falcons with distinctive white eyebrows and dark wing-pit patches. Prairie falcons inhabit hills, canyons, and mountains of arid grasslands and shrub-steppes of southwestern Canada, western United States, Baja California, and northern Mexico. They nest primarily on cliffs overlooking large open areas, using a ledge, cavity, crevice, or an abandoned nest of eagles, hawks, or ravens.
Gambelia sila	blunt-nosed leopard lizard	E	E	None	This species inhabits semiarid grasslands, alkali flats, low foothills, canyon floors, large washes, and arroyos, usually on sandy, gravelly, or loamy substrate, sometimes on hardpan. This species is common where there are abundant rodent burrows, rare or absent in dense vegetation or tall grass. Habitats of this species include (in order of decreasing favorability): 1.) Clump grass and saltbush grassland, with sandy soil, 2.) Washes with brush, in grassland, with sandy soil, 3.) Alkali flats, with saltbush in sandy or gravelly soil, and 4.) Grassland with hardpan soil. This lizard cannot survive on lands under cultivation; although it may use edges adjacent to suitable habitat. Repopulation of this species for an area after tilling ends requires at least 10 years. This lizard basks on kangaroo rat (Dipodomys deserti) mounds and often seeks cover at the base of shrubs, in the burrows of small mammals, or in rock piles. Adults may excavate shallow burrows for shelter but depend on deeper burrows of rodents for hibernation and nesting. Eggs typically are laid in an abandoned rodent burrow, at a depth of approximately 50 centimeters (500 millimeters).
Gila orcuttii	arroyo chub	None	None	SC	Slow-moving or backwater sections of warm to cool (10 to 24 Celsius (50 to 75.2 Fahrenheit) streams with mud or sand substrates. Depths are typically greater than 40 cm (15.75 inches).
Gymnogyps californianus	California condor	E - CH	E	None	Expanses of open savannah, grasslands, and foothill chaparral in mountain ranges of moderate altitude; nests in deep canyons containing clefts in rocky walls or large trees, foraging up to 100 mi from roost/nest. Foraging occurs mostly in grasslands, including oak savannah. The current range in California includes portions of Monterey, San Benito, San Luis Obispo, Santa Barbara, Ventura, Los Angeles, Kern, Tulare, and Fresno Counties.
Haliaeetus leucocephalus	bald eagle	T	E	None	Nests in mature open canopies of large trees within 1 mi of a large water source.
Helminthoglypta walkeriana	Morro shoulderband (=banded dune) snail	E - CH	None	None	Coastal dune scrub dominated by woody shrubs, especially *Ericameria ericoides*, *Eriogonum parvifolium*, *Eriastrum densifolium*, *Lupinus chamissonis*, *Artemisia californica*, and *Saliva melifera*. In areas where the snails have been found, mats of *Carpobrotus chilensis* are common, and *Dudleya caespitosa* commonly occurs under *Ericameria* shrubs.
Laterallus	California black rail	None	T	None	Wetlands, marshes, thickets with recent sightings in near oak foothill woodlands in eastern Yuba

Scientific Name	Common Name	Federal	State	CDFG	Habitat Description
jamaicensis coturniculus					County. Nests with eggs have been documented from March to June.
Lasiurus blossevillii	Western red bat	None	None	SC	It occurs among broadleaf woodlands where it roosts during the day.
Masticophis flagellum ruddocki	San Joaquin whipsnake	None	None	SC	The San Joaquin whipsnake (or San Joaquin coachwhip) occurs primarily from the Delta region southward in the San Joaquin Valley and the Coast Ranges to Kern and Santa Barbara counties. It is known from ten records in the vicinity of Corral Hollow. All of these records are used to define occupied habitat in San Joaquin County. This species is known from a variety of habitats, including grassland, savanna, chaparral, and woodland; as a result, suitable habitat may be present on the eastern side of the County as well.
Neotoma lepida intermedia	San Diego desert woodrat	None	None	SC	Desert woodrats commonly inhabit Joshua tree woodlands, pinyon-juniper woodlands, mixed chaparral, sagebrush, and desert habitats.
Neotoma macrotis luciana	Monterey dusky-footed woodrat	None	None	SC	Builds large stick nests in chaparral and woodland habitats of moderate canopy and moderate to dense understory.
Nyctinomops macrotis	big free -tailed bat	None	None	SC	Big free-tailed bats roost mainly in crevices and rocks in cliff situations, although there is some documentation of roosts in buildings, caves, and tree cavities.
Oncorhynchus mykiss irideus	steelhead - south/central California coast ESU	T	None	SC	Both anadromous and non-anadromous forms exist. Anadromous forms migrate between freshwater breeding and marine non-breeding habitats; California breeders migrate to non-breeding habitats as far away as Alaska.
Oncorhynchus mykiss irideus	steelhead - southern California coast ESU	E	None	SC	Both anadromous and non-anadromous forms exist. Anadromous forms migrate between freshwater breeding and marine non-breeding habitats; California breeders migrate to non-breeding habitats as far away as Alaska.
Onychomys torridus tularensis	Tulare grasshopper mouse	None	None	SC	This species inhabits hot, arid valleys and scrub deserts in the southern San Joaquin Valley. This species is known to occur along the western margins of the Tulare Basin, including western Kern County. This species' diet is primarily composed of insects; although they are known to also eat mice, frogs, and seeds. This species' breeding period occurs during spring and summer with litters born from May through July.
Pelacanus occidentalis	brown pelican	E	None	None	Colonial nester on coastal islands just outside the surf line; nests on coastal islands of small to moderate size which afford immunity from attack by ground-dwelling predators.
Perognathus inornatus psammophilus	Salinas pocket mouse	None	None	SC	Burrows in sandy and other friable soils of grasslands and savannah habitats in the Salinas Valley.
Phrynosoma coronatum (frontale population)	Coast (California) horned lizard	None	None	SC	Typically burrows in loose soil substrates of grassland and scrub habitats of the Sierra Nevada foothills from Butte County to Kern County and through the central and southern California coast. Periods of inactivity and winter hibernation are spent burrowing into the soils under surface objects such as logs or rocks, in mammal burrows, or in crevices.
Progne subis	purple martin	None	None	SC	Nests from April to August in wooded low-elevation habitats such as valley foothill and montane hardwood, and riparian habitats. Found in a variety of open habitats during migration including grassland, wet meadow, and fresh emergent wetland, usually near water.

Scientific Name	Common Name	Federal	State	CDFG	Habitat Description
Rallus longirostris obsoletus	California clapper rail	E	E	None	Salt water and brackish marshes traversed by tidal sloughs in the vicinity of the San Francisco Bay. Typically associated with abundant growths of pickleweed and cordgrass.
Rana aurora draytonii	California red-legged frog	T - CH	None	SC	Occurs in permanent or nearly permanent water sources, ponds, marshes, rivers, streams, and irrigation ditches, typically with emergent vegetation.
Rana boylii	foothill yellow-legged frog	None	None	SC	Partly shaded, shallow streams and riffles with a rocky substrate in various habitats, with adjacent sunny banks or open woodlands. Breeding season begins mid-March to May.
Spea (=Scaphiopus) hammondii	western spadefoot	None	None	SC	Primarily occurs in grasslands but also occurs in valley and foothill woodlands. Requires vernal pools or other temporary pools for breeding. Breeds January to May.
Sterna antillarum browni	California least tern	E	E	None	Summer/nesting in Bay Area; isolated colony in San Francisco Bay on sandy beaches bordering shallow water in estuaries; bulk of distribution in southern California coast. The least tern arrives at its breeding grounds in late April. The breeding colonies are not dense and may appear along either marine or estuarine shores, or on sand bar islands in large rivers, in areas free from humans or predators. Nests are situated on barren to sparsely vegetated places near water, normally on sandy or gravelly substrates.
Taricha torosa torosa	Coast Range newt	None	None	SC	Coastal drainages from Mendocino County to San Diego County. Lives in terrestrial habitats near ponds, reservoirs, or slow-moving streams for breeding.
Taxidea taxus	American badger	None	None	SC	Burrows in friable soils of drier open shrub, forest, and open grassland habitats.
Thamnophis hammondii	two-striped garter snake	None	None	SC	Found in and near permanent freshwater streams with rocky beds and riparian growth.
Trimerotropis occulens	Lompoc grasshopper	None	None	None	Grasslands.
Tryonia imitator	mimic tryonia (=California brackishwater snail)	None	None	None	Snail found in brackish salt marshes. Inhabits coastal lagoons, estuaries and salt marshes where it lives in permanently flooded areas. Reported from Lake Merritt but population probably extirpated.
Vireo bellii pusillus	least Bell's vireo	E - CH	None	None	Riparian woodlands of California's Central Valley and low elevation riparian streams.
Vulpes macrotis mutica	San Joaquin kit fox	E	T	None	Habitat includes annual grasslands or grassy open stages with scattered shrubby vegetation. Needs loose-textured sandy soils for burrowing and a suitable prey base.

Source: San Luis Obispo CNDDB and USFWS County list database queried on February 3, 2010
Notes:
Federal: C = candidate, T = threatened, E = endangered CH = Critical Habitat has been designated for the species within the county
State: T = threatened, E = endangered
California Department of Fish and Game (CDFG): SC = Species of Concern

https://pacinst.org/

https://pacinst.org/reports/sea_level_rise/hazmaps.html

https://pacinst.org/publication/the-impacts-of-sea-level-rise-on-the-california-coast-sea-level-rise-maps/

APPENDIX E: SAN LUIS OBISPO COUNTY AREAS OF POTENTIAL FLOODING, EROSION, AND WETLAND MIGRATION DUE TO CLIMATE CHANGE

California Flood Risk: Sea Level Rise
Burro Mountain Quadrangle

Interstate
US Highway
State Highway
County Highway

Current Coastal Base Flood (approximate 100-year flood extent)
Sea Level Rise Scenario Coastal Base Flood + 1.4 meters (55 inches)
Landward Limit of Erosion High Hazard Zone in 2100
Coastal Zone Boundary

0 0.25 0.5 1 1.5 2
Miles

0 0.5 1 2 3
Kilometers

Adjoining Quadrangles:

1	2	3
4		5
6	7	8

1: Cape San Martin
2: *not printed*
3: *not printed*
4: Villa Creek
5: *not printed*
6: *not printed*
7: Piedras Blancas
8: San Simeon

Map extents match USGS 7.5 minute topographic maps

Data Sources: US Geological Survey, Department of Commerce (DOC), National Oceanic and Atmospheric Administration (NOAA), National Ocean Service (NOS), Coastal ServicesCenter (CSC), Scripps Institution of Oceanography, Phillip W Williams and Associates, Inc. (PWA), US Department of Agriculture (USDA), California Coastal Commission, and National Aeronautics and Space Administration (NASA). Imagery from ESRI and i-cubed.

Created by the Pacific Institute, Oakland, California, 2009.

Project funded by the California Energy Commission's Public Interest Energy Research Program, CalTrans, and the California Ocean Protection Council

Grid coordinates:
UTM Zone 10N meters
NAD83 GCS degrees

California Flood Risk: Sea Level Rise
Cambria Quadrangle

Interstate
US Highway
State Highway
County Highway

Current Coastal Base Flood (approximate 100-year flood extent)
Sea Level Rise Scenario Coastal Base Flood + 1.4 meters (55 inches)
Landward Limit of Erosion High Hazard Zone in 2100
Coastal Zone Boundary

0 0.25 0.5 1 1.5 2
Miles

0 0.5 1 2 3
Kilometers

Created by the Pacific Institute, Oakland, California, 2009.

Project funded by the California Energy Commission's Public Interest Energy Research Program, CalTrans, and the California Ocean Protection Council

Grid coordinates:
UTM Zone 10N meters
NAD83 GCS degrees

Adjoining Quadrangles:

1	2	3
4		5
6	7	8

1: San Simeon
2: *not printed*
3: *not printed*
4: Pico Creek
5: *not printed*
6: *not printed*
7: Cayucos OE W
8: Cayucos

Map extents match USGS 7.5 minute topographic maps

Data Sources: US Geological Survey, Department of Commerce (DOC), National Oceanic and Atmospheric Administration (NOAA), National Ocean Service (NOS), Coastal ServicesCenter (CSC), Scripps Institution of Oceanography, Philip Williams and Associates, Inc. (PWA), US Department of Agriculture (USDA), California Coastal Commission, and National Aeronautics and Space Administration (NASA). Imagery from ESRI and i-cubed.

California Flood Risk: Sea Level Rise
Cayucos Quadrangle

Interstate
US Highway
State Highway
County Highway

Current Coastal Base Flood (approximate 100-year flood extent)
Sea Level Rise Scenario Coastal Base Flood + 1.4 meters (55 inches)
Landward Limit of Erosion High Hazard Zone in 2100
Coastal Zone Boundary

0 0.25 0.5 1 1.5 2
Miles

0 0.5 1 2 3
Kilometers

Grid coordinates:
UTM Zone 10N meters
NAD83 GCS degrees

Adjoining Quadrangles:

1	2	3
4		5
6	7	8

1: Cambria
2: *not printed*
3: *not printed*
4: Cayucos OE W
5: Morro Bay North
6: *not printed*
7: Morro Bay South OE W
8: Morro Bay South

Map extents match USGS 7.5 minute topographic maps

Data Sources: US Geological Survey, Department of Commerce (DOC), National Oceanic and Atmospheric Administration (NOAA), National Ocean Service (NOS), Coastal ServicesCenter (CSC), Scripps Institution of Oceanography, Philip Williams and Associates, Inc. (PWA), US Department of Agriculture (USDA), California Coastal Commission, and National Aeronautics and Space Administration (NASA). Imagery from ESRI and i-cubed.

Created by the Pacific Institute, Oakland, California, 2009.

Project funded by the California Energy Commission's Public Interest Energy Research Program, CalTrans, and the California Ocean Protection Council

California Flood Risk: Sea Level Rise
Cayucos OE W Quadrangle

Interstate
US Highway
State Highway
County Highway

Current Coastal Base Flood (approximate 100-year flood extent)
Sea Level Rise Scenario Coastal Base Flood + 1.4 meters (55 inches)
Landward Limit of Erosion High Hazard Zone in 2100
Coastal Zone Boundary

0 0.25 0.5 1 1.5 2
Miles

0 0.5 1 2 3
Kilometers

Created by the Pacific Institute, Oakland, California, 2009.

Project funded by the California Energy Commission's Public Interest Energy Research Program, CalTrans, and the California Ocean Protection Council

Grid coordinates:
UTM Zone 10N meters
NAD83 GCS degrees

Adjoining Quadrangles:

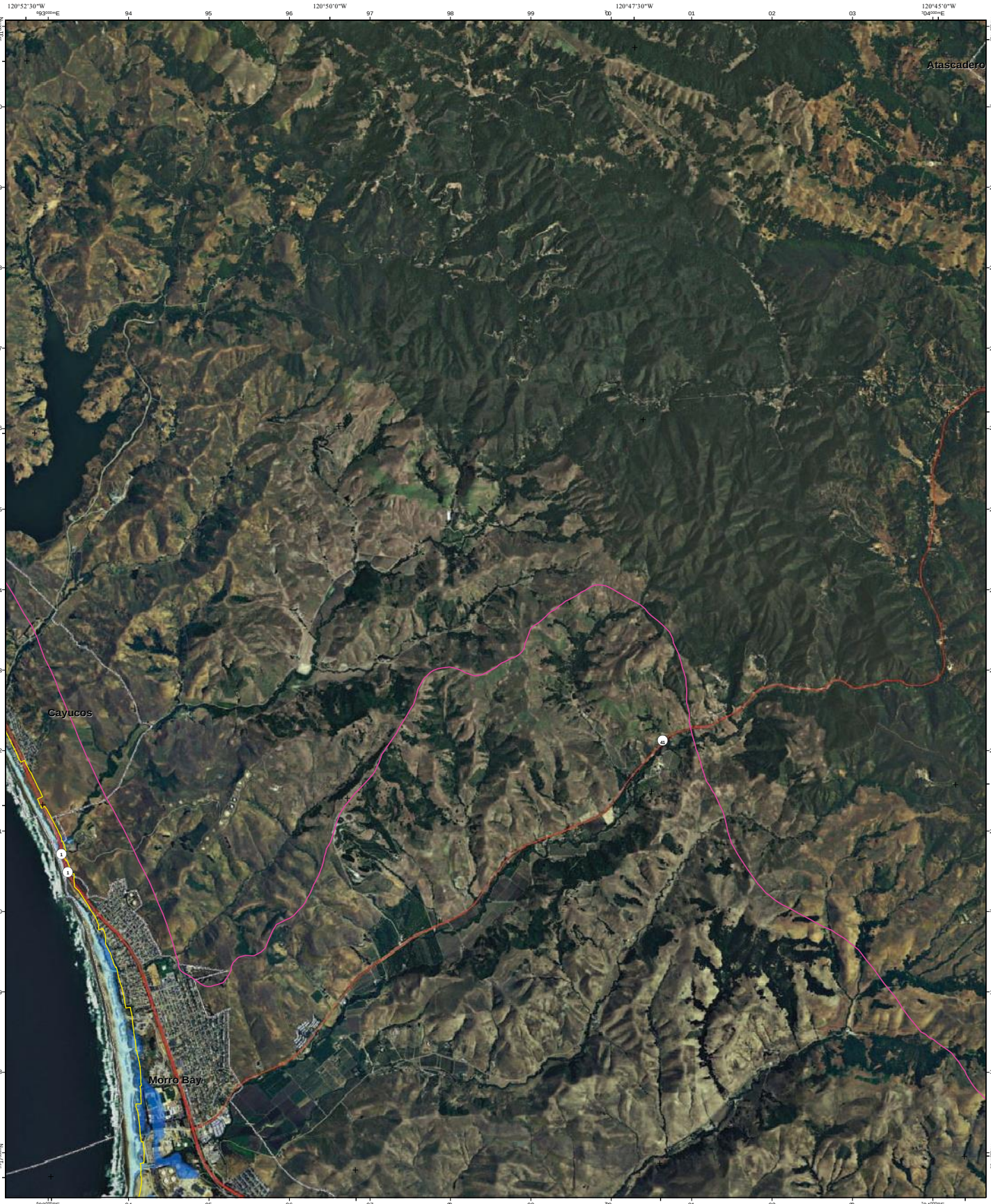
1	2	3
4		5
6	7	8

1: Pico Creek
2: Cambria
3: *not printed*
4: *not printed*
5: Cayucos
6: *not printed*
7: *not printed*
8: Morro Bay South OE W

Map extents match USGS 7.5 minute topographic maps

Data Sources: US Geological Survey, Department of Commerce (DOC), National Oceanic and Atmospheric Administration (NOAA), National Ocean Service (NOS), Coastal ServicesCenter (CSC), Scripps Institution of Oceanography, Philip Williams and Associates, Inc. (PWA), US Department of Agriculture (USDA), California Coastal Commission, and National Aeronautics and Space Administration (NASA). Imagery from ESRI and i-cubed.

California Flood Risk: Sea Level Rise
Morro Bay North Quadrangle



Interstate
US Highway
State Highway
County Highway

Current Coastal Base Flood
(approximate 100-year flood extent)
Sea Level Rise Scenario
Coastal Base Flood + 1.4 meters (55 inches)
Landward Limit of
Erosion High Hazard Zone in 2100
Coastal Zone Boundary

0 0.25 0.5 1 1.5 2
Miles

0 0.5 1 2 3
Kilometers

Created by the Pacific Institute, Oakland, California, 2009.

Project funded by the California Energy Commission's Public Interest Energy Research Program, CalTrans, and the California Ocean Protection Council

Grid coordinates:
UTM Zone 10N meters
NAD83 GCS degrees

Adjoining Quadrangles:

1	2	3
4		5
6	7	8

1: *not printed*
2: *not printed*
3: *not printed*
4: Cayucos
5: *not printed*
6: Morro Bay South OE W
7: Morro Bay South
8: *not printed*

Map extents match USGS 7.5 minute topographic maps

Data Sources: US Geological Survey, Department of Commerce (DOC), National Oceanic and Atmospheric Administration (NOAA), National Ocean Service (NOS), Coastal ServicesCenter (CSC), Scripps Institution of Oceanography, Phillip W Williams and Associates, Inc. (PWA), US Department of Agriculture (USDA), California Coastal Commission, and National Aeronautics and Space Administration (NASA). Imagery from ESRI and i-cubed.

California Flood Risk: Sea Level Rise
Morro Bay South Quadrangle

Interstate
US Highway
State Highway
County Highway

Current Coastal Base Flood (approximate 100-year flood extent)
Sea Level Rise Scenario Coastal Base Flood + 1.4 meters (55 inches)
Landward Limit of Erosion High Hazard Zone in 2100
Coastal Zone Boundary

0 0.25 0.5 1 1.5 2
Miles

0 0.5 1 2 3
Kilometers

Grid coordinates:
UTM Zone 10N meters
NAD83 GCS degrees

Adjoining Quadrangles:

1	2	3
4		5
6	7	8

1: Cayucos
2: Morro Bay North
3: *not printed*
4: Morro Bay South OE W
5: *not printed*
6: Port San Luis OE W
7: Port San Luis
8: Pismo Beach

Map extents match USGS 7.5 minute topographic maps

Data Sources: US Geological Survey, Department of Commerce (DOC), National Oceanic and Atmospheric Administration (NOAA), National Ocean Service (NOS), Coastal ServicesCenter (CSC), Scripps Institution of Oceanography, Philip W Williams and Associates, Inc. (PWA), US Department of Agriculture (USDA), California Coastal Commission, and National Aeronautics and Space Administration (NASA). Imagery from ESRI and i-cubed.

Created by the Pacific Institute, Oakland, California, 2009.

Project funded by the California Energy Commission's Public Interest Energy Research Program, CalTrans, and the California Ocean Protection Council

California Flood Risk: Sea Level Rise
Oceano Quadrangle

Interstate
US Highway
State Highway
County Highway

Current Coastal Base Flood (approximate 100-year flood extent)
Sea Level Rise Scenario Coastal Base Flood + 1.4 meters (55 inches)
Landward Limit of Erosion High Hazard Zone in 2100
Coastal Zone Boundary

0 0.25 0.5 1 1.5 2
Miles

0 0.5 1 2 3
Kilometers

Created by the Pacific Institute, Oakland, California, 2009.

Project funded by the California Energy Commission's Public Interest Energy Research Program, CalTrans, and the California Ocean Protection Council

Grid coordinates:
UTM Zone 10N meters
NAD83 GCS degrees

Adjoining Quadrangles:

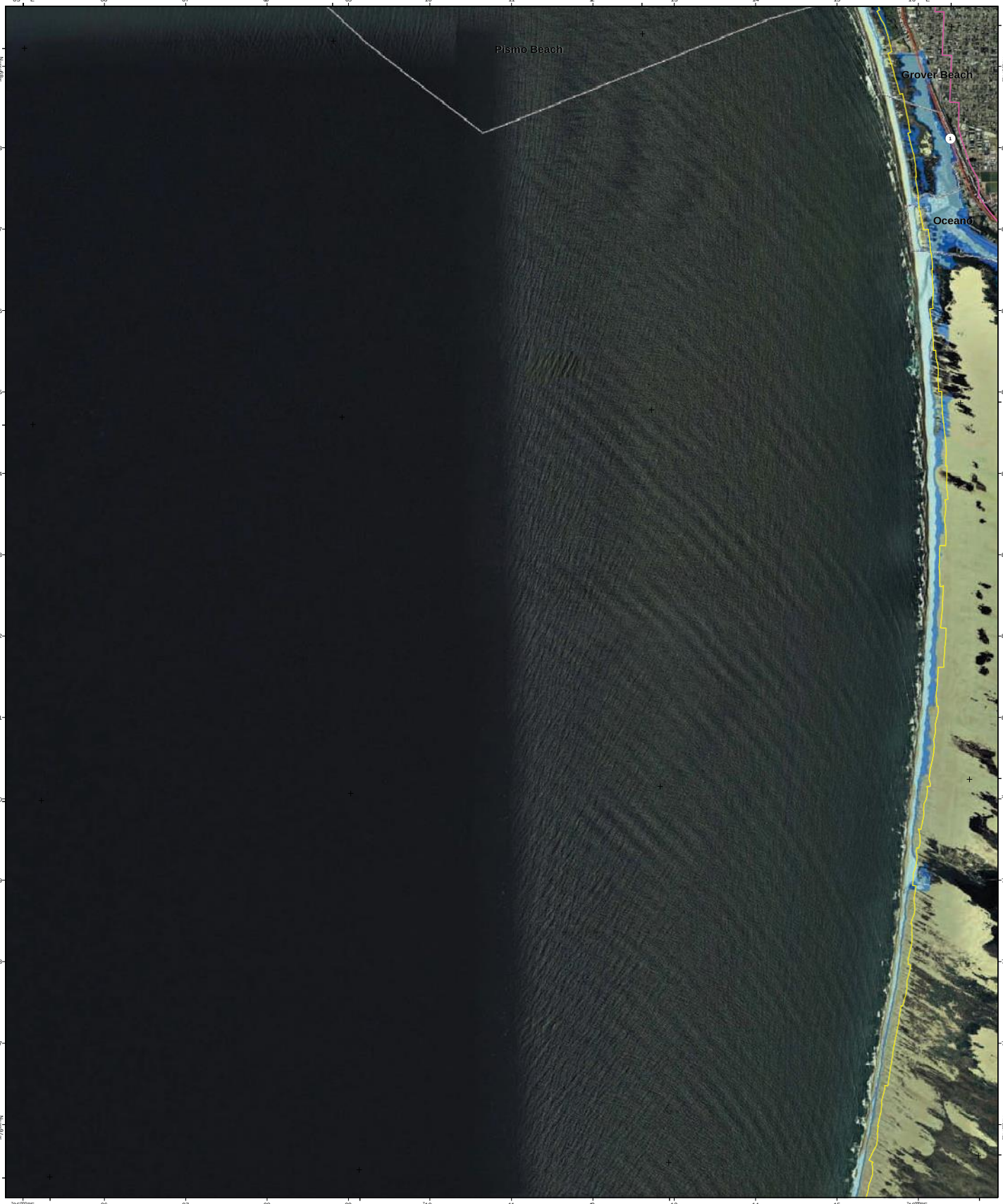
1	2	3
4		5
6	7	8

1: Pismo Beach
2: Arroyo Grande NE
3: *not printed*
4: Oceano OE W
5: *not printed*
6: Point Sal
7: *not printed*
8: *not printed*

Map extents match USGS 7.5 minute topographic maps

Data Sources: US Geological Survey, Department of Commerce (DOC), National Oceanic and Atmospheric Administration (NOAA), National Ocean Service (NOS), Coastal ServicesCenter (CSC), Scripps Institution of Oceanography, Philip Williams and Associates, Inc. (PWA), US Department of Agriculture (USDA), California Coastal Commission, and National Aeronautics and Space Administration (NASA). Imagery from ESRI and i-cubed.

California Flood Risk: Sea Level Rise
Oceano OE W Quadrangle



Interstate
US Highway
State Highway
County Highway

Current Coastal Base Flood (approximate 100-year flood extent)
Sea Level Rise Scenario Coastal Base Flood + 1.4 meters (55 inches)
Landward Limit of Erosion High Hazard Zone in 2100
Coastal Zone Boundary

0 0.25 0.5 1 1.5 2
Miles

0 0.5 1 2 3
Kilometers

Created by the Pacific Institute, Oakland, California, 2009.

Project funded by the California Energy Commission's Public Interest Energy Research Program, CalTrans, and the California Ocean Protection Council

Grid coordinates:
UTM Zone 10N meters
NAD83 GCS degrees

Adjoining Quadrangles:

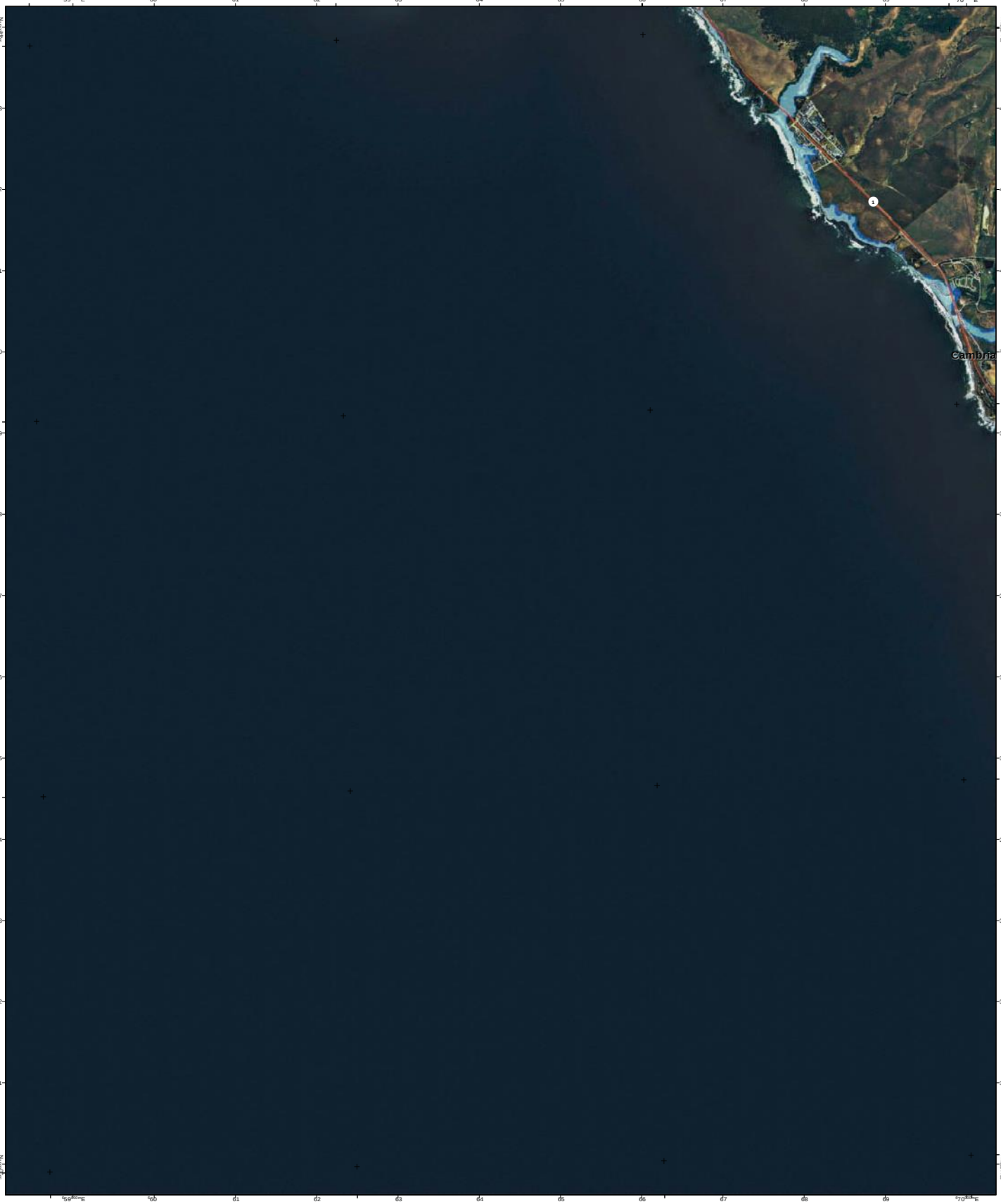
1	2	3
4		5
6	7	8

1: Port San Luis
2: Pismo Beach
3: Arroyo Grande NE
4: *not printed*
5: Oceano
6: *not printed*
7: Point Sal
8: *not printed*

Map extents match USGS 7.5 minute topographic maps

Data Sources: US Geological Survey, Department of Commerce (DOC), National Oceanic and Atmospheric Administration (NOAA), National Ocean Service (NOS), Coastal ServicesCenter (CSC), Scripps Institution of Oceanography, Philip Williams and Associates, Inc. (PWA), US Department of Agriculture (USDA), California Coastal Commission, and National Aeronautics and Space Administration (NASA). Imagery from ESRI and i-cubed.

California Flood Risk: Sea Level Rise
Pico Creek Quadrangle



Interstate
US Highway
State Highway
County Highway

Current Coastal Base Flood (approximate 100-year flood extent)
Sea Level Rise Scenario Coastal Base Flood + 1.4 meters (55 inches)
Landward Limit of Erosion High Hazard Zone in 2100
Coastal Zone Boundary

0 0.25 0.5 1 1.5 2
Miles

0 0.5 1 2 3
Kilometers

Adjoining Quadrangles:

1	2	3
4		5
6	7	8

1: Piedras Blancas
2: San Simeon
3: *not printed*
4: *not printed*
5: Cambria
6: *not printed*
7: *not printed*
8: Cayucos OE W

Map extents match USGS 7.5 minute topographic maps

Data Sources: US Geological Survey, Department of Commerce (DOC), National Oceanic and Atmospheric Administration (NOAA), National Ocean Service (NOS), Coastal ServicesCenter (CSC), Scripps Institution of Oceanography, Philip Williams and Associates, Inc. (PWA), US Department of Agriculture (USDA), California Coastal Commission, and National Aeronautics and Space Administration (NASA). Imagery from ESRI and i-cubed.

Created by the Pacific Institute, Oakland, California, 2009.

Project funded by the California Energy Commission's Public Interest Energy Research Program, CalTrans, and the California Ocean Protection Council

Grid coordinates:
UTM Zone 10N meters
NAD83 GCS degrees

California Flood Risk: Sea Level Rise
Piedras Blancas Quadrangle

Interstate
US Highway
State Highway
County Highway

Current Coastal Base Flood (approximate 100-year flood extent)
Sea Level Rise Scenario Coastal Base Flood + 1.4 meters (55 inches)
Landward Limit of Erosion High Hazard Zone in 2100
Coastal Zone Boundary

0 0.25 0.5 1 1.5 2
Miles

0 0.5 1 2 3
Kilometers

Grid coordinates:
UTM Zone 10N meters
NAD83 GCS degrees

Adjoining Quadrangles:

1	2	3
4		5
6	7	8

1: Villa Creek
2: Burro Mountain
3: *not printed*
4: *not printed*
5: San Simeon
6: *not printed*
7: *not printed*
8: Pico Creek

Map extents match USGS 7.5 minute topographic maps

Data Sources: US Geological Survey, Department of Commerce (DOC), National Oceanic and Atmospheric Administration (NOAA), National Ocean Service (NOS), Coastal ServicesCenter (CSC), Scripps Institution of Oceanography, Philip Williams and Associates, Inc. (PWA), US Department of Agriculture (USDA), California Coastal Commission, and National Aeronautics and Space Administration (NASA). Imagery from ESRI and i-cubed.

Created by the Pacific Institute, Oakland, California, 2009.

Project funded by the California Energy Commission's Public Interest Energy Research Program, CalTrans, and the California Ocean Protection Council

California Flood Risk: Sea Level Rise
Pismo Beach Quadrangle

PACIFIC INSTITUTE

Interstate
US Highway
State Highway
County Highway

Current Coastal Base Flood (approximate 100-year flood extent)
Sea Level Rise Scenario Coastal Base Flood + 1.4 meters (55 inches)
Landward Limit of Erosion High Hazard Zone in 2100
Coastal Zone Boundary

0 0.25 0.5 1 1.5 2
Miles

0 0.5 1 2 3
Kilometers

Grid coordinates:
UTM Zone 10N meters
NAD83 GCS degrees

Adjoining Quadrangles:

1	2	3
4		5
6	7	8

1: Morro Bay South
2: *not printed*
3: *not printed*
4: Port San Luis
5: Arroyo Grande NE
6: *not printed*
7: Oceano OE W
8: Oceano

Map extents match USGS 7.5 minute topographic maps

Data Sources: US Geological Survey, Department of Commerce (DOC), National Oceanic and Atmospheric Administration (NOAA), National Ocean Service (NOS), Coastal ServicesCenter (CSC), Scripps Institution of Oceanography, Philip W Williams and Associates, Inc. (PWA), US Department of Agriculture (USDA), California Coastal Commission, and National Aeronautics and Space Administration (NASA). Imagery from ESRI and i-cubed.

Created by the Pacific Institute, Oakland, California, 2009.

Project funded by the California Energy Commission's Public Interest Energy Research Program, CalTrans, and the California Ocean Protection Council

California Flood Risk: Sea Level Rise
Point Sal Quadrangle

Interstate
US Highway
State Highway
County Highway

Current Coastal Base Flood (approximate 100-year flood extent)
Sea Level Rise Scenario Coastal Base Flood + 1.4 meters (55 inches)
Landward Limit of Erosion High Hazard Zone in 2100
Coastal Zone Boundary

0 0.25 0.5 1 1.5 2
Miles

0 0.5 1 2 3
Kilometers

Created by the Pacific Institute, Oakland, California, 2009.

Project funded by the California Energy Commission's Public Interest Energy Research Program, CalTrans, and the California Ocean Protection Council

Grid coordinates:
UTM Zone 10N meters
NAD83 GCS degrees

Adjoining Quadrangles:

1	2	3
4		5
6	7	8

1: *not printed*
2: Oceano OE W
3: Oceano
4: *not printed*
5: *not printed*
6: *not printed*
7: Casmalia OE W
8: Casmalia

Map extents match USGS 7.5 minute topographic maps

Data Sources: US Geological Survey, Department of Commerce (DOC), National Oceanic and Atmospheric Administration (NOAA), National Ocean Service (NOS), Coastal ServicesCenter (CSC), Scripps Institution of Oceanography, Philip Williams and Associates, Inc. (PWA), US Department of Agriculture (USDA), California Coastal Commission, and National Aeronautics and Space Administration (NASA). Imagery from ESRI and i-cubed.

California Flood Risk: Sea Level Rise
Port San Luis Quadrangle

Interstate
US Highway
State Highway
County Highway

Current Coastal Base Flood (approximate 100-year flood extent)
Sea Level Rise Scenario Coastal Base Flood + 1.4 meters (55 inches)
Landward Limit of Erosion High Hazard Zone in 2100
Coastal Zone Boundary

0 0.25 0.5 1 1.5 2
Miles

0 0.5 1 2 3
Kilometers

Adjoining Quadrangles:

1	2	3
4		5
6	7	8

1: Morro Bay South OE W
2: Morro Bay South
3: *not printed*
4: Port San Luis OE W
5: Pismo Beach
6: *not printed*
7: *not printed*
8: Oceano OE W

Map extents match USGS 7.5 minute topographic maps

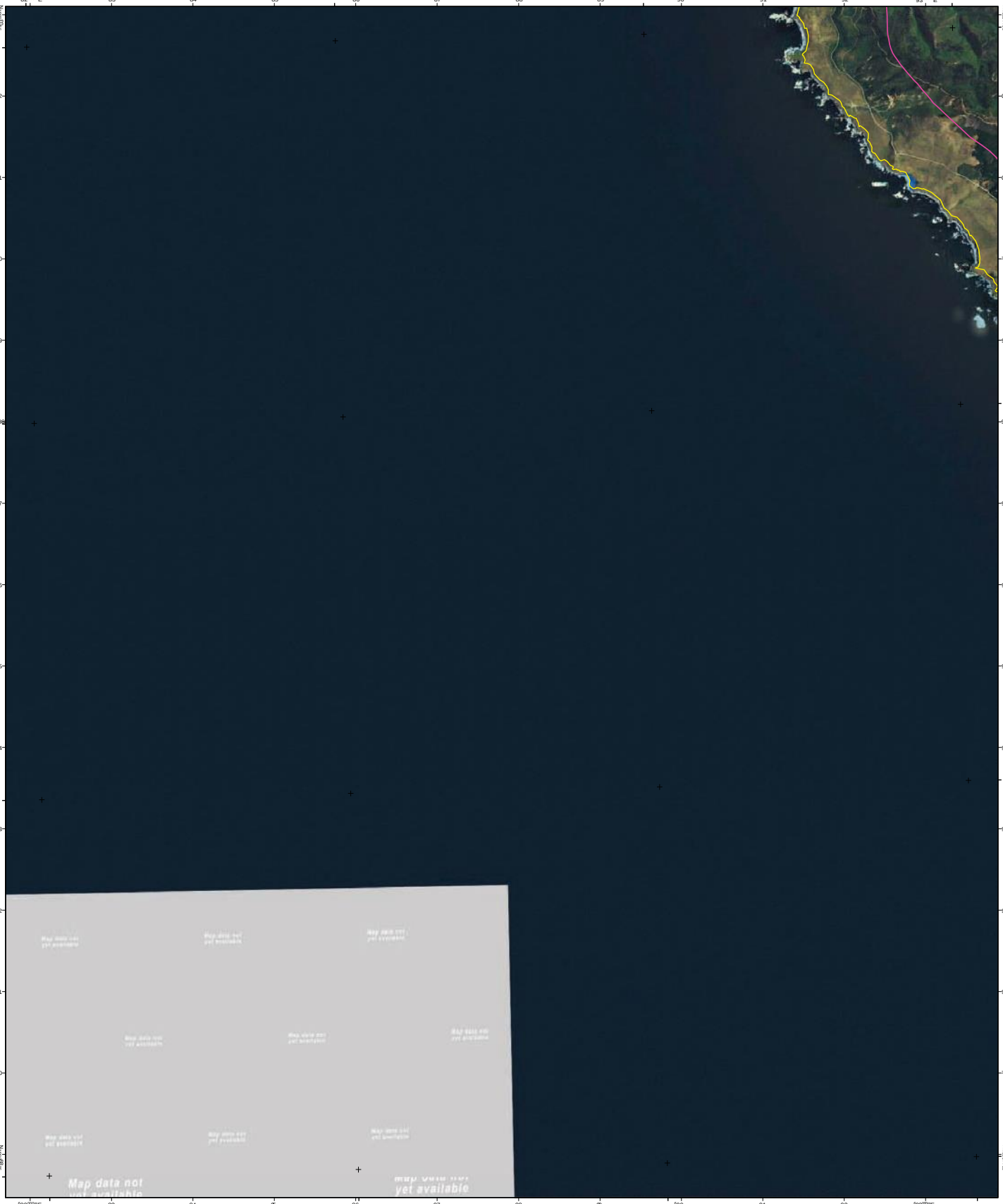
Data Sources: US Geological Survey, Department of Commerce (DOC), National Oceanic and Atmospheric Administration (NOAA), National Ocean Service (NOS), Coastal ServicesCenter (CSC), Scripps Institution of Oceanography, Philip Williams and Associates, Inc. (PWA), US Department of Agriculture (USDA), California Coastal Commission, and National Aeronautics and Space Administration (NASA). Imagery from ESRI and i-cubed.

Created by the Pacific Institute, Oakland, California, 2009.

Project funded by the California Energy Commission's Public Interest Energy Research Program, CalTrans, and the California Ocean Protection Council

Grid coordinates:
UTM Zone 10N meters
NAD83 GCS degrees

California Flood Risk: Sea Level Rise
Port San Luis OE W Quadrangle



Interstate
US Highway
State Highway
County Highway

Current Coastal Base Flood (approximate 100-year flood extent)
Sea Level Rise Scenario Coastal Base Flood + 1.4 meters (55 inches)
Landward Limit of Erosion High Hazard Zone in 2100
Coastal Zone Boundary

0 0.25 0.5 1 1.5 2
Miles

0 0.5 1 2 3
Kilometers

Adjoining Quadrangles:

1	2	3
4		5
6	7	8

1: *not printed*
2: Morro Bay South OE W
3: Morro Bay South
4: *not printed*
5: Port San Luis
6: *not printed*
7: *not printed*
8: *not printed*

Map extents match USGS 7.5 minute topographic maps

Data Sources: US Geological Survey, Department of Commerce (DOC), National Oceanic and Atmospheric Administration (NOAA), National Ocean Service (NOS), Coastal ServicesCenter (CSC), Scripps Institution of Oceanography, Philip Williams and Associates, Inc. (PWA), US Department of Agriculture (USDA), California Coastal Commission, and National Aeronautics and Space Administration (NASA). Imagery from ESRI and i-cubed.

Created by the Pacific Institute, Oakland, California, 2009.

Project funded by the California Energy Commission's Public Interest Energy Research Program, CalTrans, and the California Ocean Protection Council

Grid coordinates:
UTM Zone 10N meters
NAD83 GCS degrees

California Flood Risk: Sea Level Rise
San Simeon Quadrangle

PACIFIC INSTITUTE

Interstate
US Highway
State Highway
County Highway

Current Coastal Base Flood (approximate 100-year flood extent)
Sea Level Rise Scenario Coastal Base Flood + 1.4 meters (55 inches)
Landward Limit of Erosion High Hazard Zone in 2100
Coastal Zone Boundary

0 0.25 0.5 1 1.5 2
Miles

0 0.5 1 2 3
Kilometers

Adjoining Quadrangles:

1	2	3
4		5
6	7	8

1: Burro Mountain
2: *not printed*
3: *not printed*
4: Piedras Blancas
5: *not printed*
6: *not printed*
7: Pico Creek
8: Cambria

Map extents match USGS 7.5 minute topographic maps

Data Sources: US Geological Survey, Department of Commerce (DOC), National Oceanic and Atmospheric Administration (NOAA), National Ocean Service (NOS), Coastal ServicesCenter (CSC), Scripps Institution of Oceanography, Philip Williams and Associates, Inc. (PWA), US Department of Agriculture (USDA), California Coastal Commission, and National Aeronautics and Space Administration (NASA). Imagery from ESRI and i-cubed.

Created by the Pacific Institute, Oakland, California, 2009.

Project funded by the California Energy Commission's Public Interest Energy Research Program, CalTrans, and the California Ocean Protection Council

Grid coordinates:
UTM Zone 10N meters
NAD83 GCS degrees

APPENDIX F: Emissions and Fuel Consumption Analysis

Title: 2015—2035 Daily Emissions
Version: EMFAC 2014 v1.07
Run Date: 12/2018—2/2019
Scenario Years: 2015, 2020, 2035 S2, 2035 S3, 2035 S4, 2045
Season: Annual
Area: San Luis Obispo County
Emissions: Tons Per Day

Year	Total Organic Gases (Tons)	Reactive Organic Gases (Tons)	Carbon Monoxide (Tons)	Nitrogen Dioxide (Tons)	Carbon Dioxide (Tons)	Particulate Matter PM10 (Tons)	Particulate Matter PM2.5 (Tons)	Sulfur Oxides (Tons)	Gas (1000s Gallons)	Diesel (1000s Gallons)
2015	2.80	2.56	19.68	5.63	3209.45	0.43	0.21	0.03	286.91	49.35
2020	1.65	1.52	10.69	3.14	2684.34	0.37	0.16	0.03	237.62	42.36
2035-S2	0.79	0.73	4.40	1.00	1953.27	0.37	0.15	0.02	163.87	37.93
2035-S3	0.76	0.70	4.26	0.97	1892.80	0.35	0.15	0.02	158.83	36.72
2035-S4	0.78	0.72	4.38	1.00	1943.23	0.36	0.15	0.02	162.99	37.76
2045	0.59	0.54	3.49	0.77	1855.28	0.36	0.15	0.02	153.19	37.99

Note: Data within the table is reflective of all vehicle classes and provides analysis beyond the vehicles classes that are required to be considered under SB 375.
Note: Analysis was generated using 100% internal travel, 50% internal-external/external-internal travel, and 0% external travel