COUNTY OF SAN LUIS OBISPO

RENEWABLE ENERGY STREAMLINING PROGRAM

DRAFT ENVIRONMENTAL IMPACT REPORT

STATE CLEARINGHOUSE NO. 2014041090
LRP2014-00015

Prepared for:

COUNTY OF SAN LUIS OBISPO
976 OSOS STREET, ROOM 200
SAN LUIS OBISPO, CA 93408

Prepared by:

PMC

In association with

ASPEN ENVIRONMENTAL GROUP

NOVEMBER 2014

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ES Executive Summary

Pursuant to California Environmental Quality Act (CEQA) Guidelines Section 15123, this section of the Environmental Impact Report (EIR) provides a brief summary of the Renewable Energy Streamlining Program (RESP or Program) and its potential impacts. The remainder of the document and technical appendices provide the discussion and support for the conclusions found here.

ES1 PURPOSE AND SCOPE OF THE ENVIRONMENTAL IMPACT REPORT

This EIR has been prepared by the County of San Luis Obispo to analyze the potential environmental effects associated with implementation of the proposed Renewable Energy Streamlining Program. The EIR analysis focuses on potential environmental impacts that could arise from implementation of the proposed Program as regulated and guided by the large number of federal, state, and local regulations, including ordinances, General Plan policies, and local resource plans. The EIR is intended to provide a credible worst-case scenario of the impacts resulting from project implementation.

ES2 PROGRAM SUMMARY

The County has prepared a Renewable Energy Streamlining Program that is intended to encourage and streamline permitting of certain solar electric facilities (SEF) and wind energy conversion systems (WECS) in the most suitable locations in the unincorporated area of the county. This would be formalized through County ordinance revisions and associated updates to County policies.

The Program includes a new Renewable Energy (RE) Combining Designation to identify the most suitable locations for renewable energy development. Section 22.14.010 of the San Luis Obispo County Land Use Ordinance (LUO) defines a combining designation as:

> *Combining designations are used to identify and highlight areas of the county having natural or built features which are sensitive, hazardous, fragile, of cultural or educational value, or of economic value as extractable natural resources. The purpose of combining designation standards is to require project design that will give careful consideration to the land features, structures and activities identified by the combining designations. These standards provide for more detailed project review where necessary to support public safety or proper use of public resources.*

The RE Combining Designation was designed to encompass areas with access to renewable energy infrastructure (transmission and substations) while excluding areas that may result in land use conflicts or otherwise impact natural resources.

The Program also includes revisions to the County's General Plan, LUO, and Williamson Act Rules of Procedure to support siting, review, and permit streamlining of distributed generation renewable energy facilities, including rooftop solar and wind facilities, solar-covered parking lots, and small wind generators. The Program focuses only on the inland area of the county and does not include the Coastal Zone.

This programmatic environmental impact report (PEIR) is intended to support streamlining of on-site facilities as well as eligible renewable energy projects in the RE Combining Designation areas. No specific renewable energy development projects are being proposed or approved as part of this environmental review and subsequent consideration of Program adoption.

ES3 SUMMARY OF ENVIRONMENTAL IMPACTS

Table ES-1 presents a summary of project impacts organized alphabetically by resource category. Of the potential environmental impacts discussed in the body of the EIR (Section 3.0), potential Program impacts to aesthetics and visual resources, agricultural resources, and land use and planning are considered significant, unavoidable, and adverse. These impacts are summarized below.

- *Aesthetics and Visual Resources* – Implementation of the proposed Program could include enclosed and open areas containing installation infrastructure (e.g., solar panels, switchgear components, and on-site maintenance operation building/structure), access roads, and fencing. These built structures (e.g., buildings, piping, fencing, and collector arrays) would introduce industrial elements into the landscape that could contrast with surrounding undisturbed areas in form, line, color, and texture.

  To reduce associated visual impacts, all ground-mounted SEFs would be subject to Site Plan Review and performance standards such as height limitations and minimum setbacks of solar facilities from adjacent parcels. Additionally, ground-mounted SEFs would not be allowed on significant ridgetops or in areas containing scenic geologic resources, such as exposed bedrock or rock outcroppings. Setback standards would minimize visual intrusion to foreground views, the distances in which streamlined solar facilities would have the greatest daytime visibility. Similarly, height standards would also reduce visual impacts by helping to minimize vertical massing and line-of-sight intrusions from adjacent viewsheds.

  Existing and proposed standards will minimize the visual impacts of solar installations. However, because the site-specific visual characteristics and setting of projects proposed under the Program cannot be known, it accordingly cannot be known with certainty that unique aesthetic and visual elements of streamlined projects could result in impacts. Therefore, a potential remains that certain SEFs could result in an aesthetic incompatibility within public view that would be considered significant, unavoidable, and adverse.

- *Agricultural Resources* – The proposed Program could result in the conversion of Important Agricultural Soils to nonagricultural uses. Specifically, ground-mounted Tier 1 SEFs up to 20 acres in total footprint size would be eligible for streamlining throughout the county (excluding the Coastal Zone) as long as they are located on disturbed land that does not have Class I or Class II soils. This does not preclude the potential for ground-mounted Tier 1 SEFs up to 20 acres in size being developed on Important Agricultural Soils, as disturbed soils can also be Important Agricultural Soils.

  In contrast, Tier 2 and 3 SEFs proposed for streamlining eligibility can not be located on Important Agricultural Soils and under the County Code, SEFs subject to a discretionary permit that are proposed on Important Agricultural Soils are required to provide a conservation easement at a 3:1 ratio on a parcel in the county other than the proposed project site.

  While this conservation easement measure could be similarly applied to Tier 1 ground-mounted SEFs proposed on Important Agricultural Soils, such mitigation would run counter to the primary objectives of the Program. The County is seeking to encourage development of these smaller-scale (20 acres or less) Tier 1 SEFs by removing barriers to approval. Requiring conservation easements for SEFs that are 20 acres or less in size

would place additional financial and legal burden on agricultural landowners, essentially discouraging applications and defeating streamlining efforts. Therefore, this measure was rejected and as a result, this impact is considered significant, unavoidable, and adverse.

- *Land Use and Planning* – As discussed in the EIR, the proposed Program is consistent with the County's overall goals, objectives, plans, and policies, as established in the General Plan and codified in the Land Use Ordinance. The one exception identified is the potential for the Program to indirectly result in the conversion of agricultural land uses to renewable energy uses, as discussed above. Accordingly, this impact is similarly identified as significant, unavoidable, and adverse.

TABLE ES-1
SUMMARY OF IMPACTS AND MITIGATION MEASURES

Impact		Level of Significance Without Mitigation	Mitigation Measure	Resulting Level of Significance
Aesthetics and Visual Resources				
Impact 3-1-1 **Construction**	Implementation of the proposed Program could result in a substantial adverse effect on a scenic view during construction.	Less Than Significant	None required	Less Than Significant
Impact 3-1-1 **Solar**	Implementation of the proposed Program could result in the development of solar energy projects that have a substantial adverse effect on a scenic view.	Significant, Unavoidable, and Adverse	None suitable	Significant, Unavoidable, and Adverse
Impact 3-1-1 **Wind**	Implementation of the proposed Program could result in the development of wind energy projects that have a substantial adverse effect on a scenic view.	Less Than Significant	None required	Less Than Significant
Impact 3-1-1 **Policy Changes**	Implementation of the proposed Program could result in the development of renewable energy projects that have a substantial adverse effect on a scenic view.	Significant, Unavoidable, and Adverse	None suitable	Significant, Unavoidable, and Adverse
Impact 3-1-2 **Solar**	Implementation of the proposed Program could introduce uses that damage scenic resources.	Less Than Significant	None required	Less Than Significant
Impact 3-1-2 **Wind**	Implementation of the proposed Program could introduce uses that damage scenic resources.	Less Than Significant	None required	Less Than Significant
Impact 3-1-2 **Policy Changes**	Implementation of the proposed Program could introduce uses that damage scenic resources.	Less Than Significant	None required	Less Than Significant
Impact 3-1-3 **Solar**	Implementation of the proposed Program could substantially degrade the visual character of an area.	Significant, Unavoidable, and Adverse	None suitable	Significant, Unavoidable, and Adverse

Impact		Level of Significance Without Mitigation	Mitigation Measure	Resulting Level of Significance
Impact 3-1-3 **Wind**	Implementation of the proposed Program could substantially degrade the visual character of an area.	Less Than Significant	None required	Less Than Significant
Impact 3-1-3 **Policy Changes**	Implementation of the proposed Program could substantially degrade the visual character of an area.	Significant, Unavoidable, and Adverse	None suitable	Significant, Unavoidable, and Adverse
Impact 3-1-4 **Solar**	Implementation of the proposed Program could result in the creation of glare or night lighting that would affect surrounding areas.	Less Than Significant	None required	Less Than Significant
Impact 3-1-4 **Wind**	Implementation of the proposed Program could result in the creation of glare or night lighting that would affect surrounding areas.	Less Than Significant	None required	Less Than Significant
Impact 3-1-4 **Policy Changes**	Implementation of the proposed Program could result in the creation of glare or night lighting that would affect surrounding areas.	Less Than Significant	None required	Less Than Significant
Impact 3-1-5 **Solar**	Implementation of the proposed Program could result in impacts to unique geological or physical features.	Less Than Significant	None required	Less Than Significant
Impact 3-1-5 **Wind**	Implementation of the proposed Program could result in impacts to unique geological or physical features.	Less Than Significant	None required	Less Than Significant
Impact 3-1-5 **Policy Changes**	Changes to countywide policies resulting from the proposed Program could result in impacts to unique geological or physical features.	Less Than Significant	None required	Less Than Significant

Impact		Level of Significance Without Mitigation	Mitigation Measure	Resulting Level of Significance
Agricultural Resources				
Impact 3-2-1 **Solar**	Implementation of the proposed Program could convert Important Agricultural Soils to nonagricultural use.	Significant, Unavoidable, and Adverse	None suitable	Significant, Unavoidable, and Adverse
Impact 3-2-1 **Wind**	Implementation of the proposed Program could convert Important Agricultural Soils to nonagricultural use.	Less Than Significant	None required	Less Than Significant
Impact 3-2-1 **Policy Changes**	Implementation of the proposed Program could result in changes to countywide policies that could indirectly result in the conversion of Important Agricultural Soils to nonagricultural use.	Significant, Unavoidable, and Adverse	None suitable	Significant, Unavoidable, and Adverse
Impact 3-2-2 **Solar**	Implementation of the proposed Program could conflict with existing zoning for agricultural use or with the Williamson Act program.	Less Than Significant	None required	Less Than Significant
Impact 3-2-2 **Wind**	Implementation of the proposed Program could conflict with existing zoning for agricultural use or with the Williamson Act program.	Less Than Significant	None required	Less Than Significant
Impact 3-2-2 **Policy Changes**	Implementation of the proposed Program could result in changes to countywide policies that could conflict with existing zoning for agricultural use or with the Williamson Act program.	Less Than Significant	None required	Less Than Significant
Impact 3-2-3 **Solar**	Implementation of the proposed Program could impair agricultural use of other property or result in conversion to other uses.	Less Than Significant	None required	Less Than Significant

Impact		Level of Significance Without Mitigation	Mitigation Measure	Resulting Level of Significance
Impact 3-2-3 **Wind**	Implementation of the proposed Program could impair agricultural use of other property or result in conversion to other uses.	Less Than Significant	None required	Less Than Significant
Impact 3-2-3 **Policy Changes**	Implementation of the proposed Program could result in changes to countywide policies that could impair agricultural use of other property or result in conversion to other uses.	Less Than Significant	None required	Less Than Significant
Air Quality				
Impact 3-3-1 **Solar/Wind**	Implementation of the proposed Program could violate state or federal ambient air quality standard and exceed county air quality emission thresholds.	Less Than Significant	None required	Less Than Significant
Impact 3-3-1 **Policy Changes**	Implementation of the proposed Program could result in changes to countywide policies that could indirectly violate state or federal ambient air quality standards or exceed county air quality emission thresholds.	Less than Significant	None required	Less Than Significant
Impact 3-3-2 **Solar/Wind**	Implementation of the proposed Program could result in exposure of a sensitive receptor to substantial air pollution concentrations.	Less Than Significant	None required	Less Than Significant
Impact 3-3-2 **Policy Changes**	Implementation of the proposed Program could result in changes to countywide policies and could result in the exposure of a sensitive receptor to substantial air pollution concentrations.	Less Than Significant	None required	Less Than Significant
Impact 3-3-3 **Solar/Wind**	Implementation of proposed solar and wind energy facilities could result in projects that would include sources of odors which could affect surrounding land uses.	Less Than Significant	None required	Less Than Significant

Impact		Level of Significance Without Mitigation	Mitigation Measure	Resulting Level of Significance
Impact 3-3-3 **Policy Changes**	Implementation of the proposed Program could result in changes to countywide policies and could result in projects that would include substantial or long-term sources of odors which could affect surrounding land uses.	Less Than Significant	None required	Less Than Significant
Impact 3-3-4 **Solar/Wind**	Implementation of proposed solar and wind energy facilities could conflict with the SLOAPCD 2001 Clean Air Plan.	Less Than Significant	None required	Less Than Significant
Impact 3-3-4 **Policy Changes**	Implementation of the proposed Program could result in changes to countywide policies that could indirectly conflict with the SLOAPCD 2001 Clean Air Plan.	Less Than Significant	None required	Less Than Significant
Biological Resources				
Impact 3-4-1 **Solar**	Implementation of the proposed Program could result in a loss of habitat for unique or special-status species.	Less Than Significant	None required	Less Than Significant
Impact 3-4-1 **Wind**	Implementation of the proposed Program could result in a loss of habitat for unique or special-status species.	Less Than Significant	None required	Less Than Significant
Impact 3-4-1 **Policy Changes**	Implementation of the proposed Program could result in changes to countywide policies that could indirectly result in a loss of habitat for unique or special-status species.	Less Than Significant	None required	Less Than Significant
Impact 3-4-2 **Solar**	Implementation of the proposed Program could reduce the extent, diversity, or quality of native or other important vegetation.	Less Than Significant	None required	Less Than Significant
Impact 3-4-2 **Wind**	Implementation of the proposed Program could reduce the extent, diversity, or quality of native or other important vegetation.	Less Than Significant	None required	Less Than Significant

Impact		Level of Significance Without Mitigation	Mitigation Measure	Resulting Level of Significance
Impact 3-4-2 **Policy Changes**	Implementation of the proposed Program could reduce the extent, diversity, or quality of native or other important vegetation.	Less Than Significant	None required	Less Than Significant
Impact 3-4-3 **Solar**	Implementation of the proposed Program could impact wetland or riparian habitat.	Less Than Significant	None required	Less Than Significant
Impact 3-4-3 **Wind**	Implementation of the proposed Program could impact wetland or riparian habitat.	Less Than Significant	None required	Less Than Significant
Impact 3-4-3 **Policy Changes**	Implementation of the proposed Program could impact wetland or riparian habitat.	Less Than Significant	None required	Less Than Significant
Impact 3-4-4 **Solar**	Implementation of the proposed Program could interfere with the movement of resident or migratory fish or wildlife species, or factors which could hinder normal activities of wildlife.	Less Than Significant	None required	Less Than Significant
Impact 3-4-4 **Wind**	Implementation of the proposed Program could interfere with the movement of resident or migratory fish or wildlife species, or factors which could hinder normal activities of wildlife.	Less Than Significant	None required	Less Than Significant
Impact 3-4-4 **Policy Changes**	Implementation of the proposed Program could interfere with the movement of resident or migratory fish or wildlife species, or factors which could hinder normal activities of wildlife.	Less Than Significant	None required	Less Than Significant
Impact 3-4-5 **Solar**	Implementation of the proposed Program could conflict with regional plans or policies to protect sensitive species or with state or federal regulations.	Less Than Significant	None required	Less Than Significant

Impact		Level of Significance Without Mitigation	Mitigation Measure	Resulting Level of Significance
Impact 3-4-5 **Wind**	Implementation of the proposed Program could conflict with regional plans or policies to protect sensitive species or with state or federal regulations.	Less Than Significant	None required	Less Than Significant
Impact 3-4-5 **Policy Changes**	Implementation of the proposed Program could conflict with regional plans or policies to protect sensitive species or with state or federal regulations.	Less Than Significant	None required	Less Than Significant
Cultural Resources				
Impact 3-5-1 **Solar**	Implementation of the proposed Program could cause a substantial adverse change in the significance of a historical resource.	Less Than Significant	None required	Less Than Significant
Impact 3-5-1 **Wind**	Implementation of the proposed Program could cause a substantial adverse change in the significance of a historical resource.	Less Than Significant	None required	Less Than Significant
Impact 3-5-1 **Policy Changes**	Implementation of the proposed Program could result in changes to countywide policies that could cause a substantial adverse change in the significance of a historical resource.	Less Than Significant	None required	Less Than Significant
Impact 3-5-2 **Solar**	Implementation of the proposed Program could cause a substantial adverse change in the significance of an archaeological resource.	Less Than Significant	None required	Less Than Significant
Impact 3-5-2 **Wind**	Implementation of the proposed Program could cause a substantial adverse change in the significance of an archaeological resource.	Less Than Significant	None required	Less Than Significant

Impact		Level of Significance Without Mitigation	Mitigation Measure	Resulting Level of Significance
Impact 3-5-2 **Policy Changes**	Implementation of the proposed Program could result in changes to countywide policies that could cause a substantial adverse change in the significance of archaeological resources.	Less Than Significant	None required	Less Than Significant
Impact 3-5-3 **Solar**	Implementation of the proposed Program could disturb human remains.	Less Than Significant	None required	Less Than Significant
Impact 3-5-3 **Wind**	Implementation of the proposed Program could disturb human remains.	Less Than Significant	None required	Less Than Significant
Impact 3-5-3 **Policy Changes**	Implementation of the proposed Program could result in changes to countywide policies that could disturb human remains.	Less Than Significant	None required	Less Than Significant
Impact 3-5-4 **Solar**	Implementation of the proposed Program could cause a substantial adverse change in the significance of a paleontological resource.	Less Than Significant	None required	Less Than Significant
Impact 3-5-4 **Wind**	Implementation of the proposed Program could cause a substantial adverse change in the significance of a paleontological resource.	Less Than Significant	None required	Less Than Significant
Impact 3-5-4 **Policy Changes**	Implementation of the proposed Program could result in changes to countywide policies that could cause a substantial adverse change in the significance of a paleontological resource.	Less Than Significant	None required	Less Than Significant

Impact		Level of Significance Without Mitigation	Mitigation Measure	Resulting Level of Significance
Geology and Soils				
Impact 3-6-1 **Solar**	Implementation of the proposed Program could result in the exposure of people, structures, and infrastructure to seismic hazards.	Less Than Significant	None required	Less Than Significant
Impact 3-6-1 **Wind**	Implementation of the proposed Program could result in the exposure of people, structures, and infrastructure to seismic hazards.	Less Than Significant	None required	Less Than Significant
Impact 3-6-1 **Policy Changes**	Implementation of the proposed Program could result in the exposure of people, structures, and infrastructure to seismic hazards.	Less Than Significant	None required	Less Than Significant
Impact 3-6-2 **Solar**	Implementation of the proposed Program could result in increased soil erosion or reduce the stability of soils within the project area.	Less Than Significant	None required	Less Than Significant
Impact 3-6-2 **Wind**	Implementation of the proposed Program could result in increased soil erosion or reduce the stability of soils within the project area.	Less than Significant	None required	Less than Significant
Impact 3-6-2 **Policy Changes**	Implementation of the proposed Program could result in changes to countywide policies that could indirectly result in increased soil erosion or reduce the stability of soils within the project area.	Less Than Significant	None required	Less Than Significant
Impact 3-6-3 **Solar**	Implementation of the proposed Program could result in structures being sited on expansive soils.	Less Than Significant	None required	Less Than Significant
Impact 3-6-3 **Wind**	Implementation of the proposed Program could result in structures being sited on expansive soils.	Less Than Significant	None required	Less Than Significant

Impact		Level of Significance Without Mitigation	Mitigation Measure	Resulting Level of Significance
Impact 3-6-3 **Policy Changes**	Implementation of the proposed Program could result in changes to countywide policies that could indirectly result in placement of structures on expansive soils.	Less Than Significant	None required	Less Than Significant
Impact 3-6-4 **Solar**	Implementation of the proposed Program could result in actions or projects that are inconsistent with the County's Safety Element relating to geologic and seismic hazards.	Less Than Significant	None required	Less Than Significant
Impact 3-6-4 **Wind**	Implementation of the proposed Program could result in actions or projects that are inconsistent with the County's Safety Element relating to geologic and seismic hazards.	Less Than Significant	None required	Less Than Significant
Impact 3-6-4 **Policy Changes**	Changes to countywide policies resulting from implementation of the proposed Program could result in actions or projects that are inconsistent with the County's Safety Element relating to geologic and seismic hazards.	Less Than Significant	None required	Less Than Significant
Impact 3-6-5 **Solar**	Implementation of the proposed Program could result in the preclusion of the future extraction of valuable mineral resources.	Less Than Significant	None required	Less Than Significant
Impact 3-6-5 **Wind**	Implementation of the proposed Program could result in preclusion of the future extraction of valuable mineral resources.	Less Than Significant	None required	Less Than Significant
Impact 3-6-5 **Policy Changes**	Changes to countywide policies resulting from implementation of the proposed Program could result in preclusion of the future extraction of valuable mineral resources.	Less Than Significant	None required	Less Than Significant

Impact		Level of Significance Without Mitigation	Mitigation Measure	Resulting Level of Significance
Greenhouse Gases and Climate Change				
Impact 3-7-1 **Solar/Wind**	Implementation of proposed solar and wind energy facilities could result in a substantial net increase in GHG emissions.	Less Than Significant	None required	Less Than Significant
Impact 3-7-1 **Policy Changes**	Implementation of the proposed Program could result in changes to countywide policies that could result in a substantial net increase in GHG emissions.	Beneficial	None required	Beneficial
Impact 3-7-2 **Solar/Wind**	Implementation of proposed solar and wind energy facilities could conflict with the County EnergyWise Plan.	Beneficial	None required	Beneficial
Impact 3-7-2 **Policy Changes**	Implementation of the proposed Program could result in changes to countywide policies that could result in a conflict with the County EnergyWise Plan.	Beneficial	None required	Beneficial
Hazards and Hazardous Materials				
Impact 3-8-1 **Construction**	Implementation of the proposed Program could create a hazard to the public through the routine transport, use, or disposal of hazardous materials during construction of solar or wind facilities.	Less Than Significant	None required	Less Than Significant
Impact 3-8-1 **Solar**	Implementation of the proposed Program could create a hazard to the public through the routine transport, use, or disposal of hazardous materials.	Less Than Significant	None required	Less Than Significant
Impact 3-8-1 **Wind**	Implementation of the proposed Program could create a hazard to the public through the routine transport, use, or disposal of hazardous materials.	Less Than Significant	None required	Less Than Significant

Impact		Level of Significance Without Mitigation	Mitigation Measure	Resulting Level of Significance
Impact 3-8-1 **Policy Changes**	Implementation of the proposed Program could result in changes to countywide policies that could indirectly create a hazard to the public through the routine transport, use, or disposal of hazardous materials.	Less Than Significant	None required	Less Than Significant
Impact 3-8-2 **Solar**	Implementation of the proposed Program could create a hazard to the public through the reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment.	Less Than Significant	None required	Less Than Significant
Impact 3-8-2 **Wind**	Implementation of the proposed Program could create a hazard to the public through the reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment.	Less Than Significant	None required	Less Than Significant
Impact 3-8-2 **Policy Changes**	Implementation of the proposed Program could create a hazard to the public through the reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment.	Less Than Significant	None required	Less Than Significant
Impact 3-8-3 **Solar**	Implementation of the proposed Program could result in emitting hazardous materials within one-quarter mile of an existing or proposed school.	Less Than Significant	None required	Less Than Significant
Impact 3-8-3 **Wind**	Implementation of the proposed Program could result in emitting hazardous materials within one-quarter mile of an existing or proposed school.	Less Than Significant	None required	Less Than Significant
Impact 3-8-3 **Policy Changes**	Implementation of the proposed Program could create a hazard to the public through the reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment.	Less Than Significant	None required	Less Than Significant

Impact		Level of Significance Without Mitigation	Mitigation Measure	Resulting Level of Significance
Impact 3-8-4 **Solar**	Implementation of the proposed Program could result in an adverse public health condition by being located on or adjacent to a site on the Cortese List.	Less Than Significant	None required	Less Than Significant
Impact 3-8-4 **Wind**	Implementation of the proposed Program could result in an adverse public health condition by being located on or adjacent to a site on the Cortese List.	Less Than Significant	None required	Less Than Significant
Impact 3-8-4 **Policy Changes**	Implementation of the proposed Program could result in an adverse public health condition by being located on or adjacent to a site on the Cortese List.	Less Than Significant	None required	Less Than Significant
Impact 3-8-5 **Solar**	The proposed Program could impair implementation of or physically interfere with adopted emergency response plan or evacuation plan.	Less Than Significant	None required	Less Than Significant
Impact 3-8-5 **Wind**	The proposed Program could impair implementation of or physically interfere with adopted emergency response plan or evacuation plan.	Less Than Significant	None required	Less Than Significant
Impact 3-8-5 **Policy Changes**	The proposed Program could impair implementation of or physically interfere with adopted emergency response plan or evacuation plan.	Less Than Significant	None required	Less Than Significant
Impact 3-8-6 **Solar**	The proposed Program could result in a safety hazard for people residing or working in the project area.	Less Than Significant	None required	Less Than Significant
Impact 3-8-6 **Wind**	The proposed Program could result in a safety hazard for people residing or working in the project area.	Less Than Significant	None required	Less Than Significant

Impact		Level of Significance Without Mitigation	Mitigation Measure	Resulting Level of Significance
Impact 3-8-6 **Policy Changes**	The proposed Program could result in a safety hazard for people residing or working in the project area.	Less Than Significant	None required	Less Than Significant
Impact 3-8-7 **Solar**	Implementation of the proposed Program could increase fire hazard risk or expose people or structures to high wildland fire hazard conditions.	Less Than Significant	None required	Less Than Significant
Impact 3-8-7 **Wind**	Implementation of the proposed Program could increase fire hazard risk or expose people or structures to high wildland fire hazard conditions.	Less Than Significant	None required	Less Than Significant
Impact 3-8-7 **Policy Changes**	The proposed Program could result in a safety hazard for people residing or working in the project area.	Less Than Significant	None required	Less Than Significant
Land Use and Planning				
Impact 3-9-1	Implementation of the proposed Program could result in potential inconsistencies with County land use policies and regulations adopted to avoid or mitigate for environmental effects.	Less Than Significant	None required	Less Than Significant
Impact 3-9-2	Implementation of the proposed Program could be potentially inconsistent with adopted environmental plans or policies of other agencies with jurisdiction over projects.	Less Than Significant	None required	Less Than Significant
Impact 3-9-3	The proposed Program could result in potential land use incompatibilities.	Less Than Significant	None required	Less Than Significant
Impact 3-9-4	The proposed Program could indirectly create a disturbance that would diminish the function of a particular land use.	Significant, Unavoidable, and Adverse	None suitable	Significant, Unavoidable, and Adverse
Noise				
Impact 3-10-1 **Solar**	Construction and operations of proposed solar energy facilities could exceed maximum allowable noise levels established by the County.	Less Than Significant	None required	Less Than Significant

Impact		Level of Significance Without Mitigation	Mitigation Measure	Resulting Level of Significance
Impact 3-10-1 **Wind**	Construction and operations of proposed wind energy facilities could exceed maximum allowable noise levels established by the County.	Less Than Significant	None required	Less Than Significant
Impact 3-10-1 **Policy Changes**	Implementation of the proposed RESP could result in changes to countywide policies that could expose people to noise levels that exceed the County Noise Ordinance thresholds or General Plan measures and policies.	Less Than Significant	None required	Less Than Significant
Impact 3-10-2 **Solar**	Implementation of the proposed Program could generate permanent increases in the ambient noise levels in the project vicinity.	Less Than Significant	None required	Less Than Significant
Impact 3-10-2 **Wind**	Implementation of the proposed Program could generate permanent increases in the ambient noise levels in the project vicinity.	Less Than Significant	None required	Less Than Significant
Impact 3-10-2 **Policy Changes**	Changes to countywide policies resulting from implementation of the proposed Program could result in permanent increases in the ambient noise levels in the project vicinity.	Less Than Significant	None required	Less Than Significant
Impact 3-10-3 **Solar**	Implementation of the proposed Program could cause a temporary or periodic increase in ambient noise in the project vicinity.	Less Than Significant	None required	Less Than Significant
Impact 3-10-3 **Wind**	Implementation of the proposed Program could cause a temporary or periodic increase in ambient noise in the project vicinity.	Less Than Significant	None required	Less Than Significant

Impact		Level of Significance Without Mitigation	Mitigation Measure	Resulting Level of Significance
Impact 3-10-3 **Policy Changes**	Implementation of the proposed Program could result in changes to countywide policies that could cause a temporary or periodic increase in ambient noise in the project vicinity.	Less Than Significant	None required	Less Than Significant
Impact 3-10-4 **Solar**	Construction activity associated with the proposed Program could create groundborne vibration in discrete locations throughout the county.	Less Than Significant	None required	Less Than Significant
Impact 3-10-4 **Wind**	Construction activity associated with the proposed Program could create groundborne vibration in discrete locations throughout the county.	Less Than Significant	None required	Less Than Significant
Impact 3-10-4 **Policy Changes**	Implementation of the proposed Program could result in changes to countywide policies that could cause create groundborne vibration in discrete locations throughout the county.	Less Than Significant	None required	Less Than Significant
Impact 3-10-5 **Solar**	Implementation of the proposed Program could result in structures located within the Airport Review designation or adjacent to a private airstrip, exposing people residing or working in the project area to severe noise levels.	Less Than Significant	None required	Less Than Significant
Impact 3-10-5 **Wind**	Implementation of the proposed Program could result in structures located within the Airport Review designation or adjacent to a private airstrip, exposing people residing or working in the project area to severe noise levels.	Less Than Significant	None required	Less Than Significant
Impact 3-10-5 **Policy Changes**	Implementation of the proposed Program could result in structures located within the Airport Review designation or adjacent to a private airstrip, exposing people residing or working in the project area to severe noise levels.	Less Than Significant	None required	Less Than Significant

Impact		Level of Significance Without Mitigation	Mitigation Measure	Resulting Level of Significance
Water Resources				
Impact 3-11-1 **Solar**	Implementation of the proposed Program could indirectly violate water quality standards.	Less Than Significant	None required	Less Than Significant
Impact 3-11-1 **Wind**	Implementation of the proposed Program could violate water quality standards.	Less Than Significant	None required	Less Than Significant
Impact 3-11-1 **Policy Changes**	Implementation of the proposed Program could result in changes to countywide policies that could violate water quality standards.	Less Than Significant	None required	Less Than Significant
Impact 3-11-2 **Solar**	Implementation of the proposed Program could interfere with groundwater recharge.	Less Than Significant	None required	Less Than Significant
Impact 3-11-2 **Wind**	Implementation of the proposed Program could interfere with groundwater recharge.	Less Than Significant	None required	Less Than Significant
Impact 3-11-2 **Policy Changes**	Implementation of the proposed Program could interfere with groundwater recharge.	Less Than Significant	None required	Less Than Significant
Impact 3-11-3 **Solar**	Implementation of the proposed Program could result in substantial erosion or siltation on- or off-site.	Less Than Significant	None required	Less Than Significant
Impact 3-11-3 **Wind**	Implementation of the proposed Program could result in substantial erosion or siltation on- or off-site.	Less Than Significant	None required	Less Than Significant
Impact 3-11-3 **Policy Changes**	Implementation of the proposed Program could result in substantial erosion or siltation on- or off-site.	Less Than Significant	None required	Less Than Significant

Impact		Level of Significance Without Mitigation	Mitigation Measure	Resulting Level of Significance
Impact 3-11-4 **Solar**	Implementation of the proposed Program could result in the creation of runoff that would exceed the capacity of existing or planned stormwater drainage systems or provide additional sources of polluted runoff.	Less Than Significant	None required	Less Than Significant
Impact 3-11-4 **Wind**	Implementation of the proposed Program could result in the creation of runoff that would exceed the capacity of existing or planned stormwater drainage systems or provide additional sources of polluted runoff.	Less Than Significant	None required	Less Than Significant
Impact 3-11-4 **Policy Changes**	Implementation of the proposed Program could result in changes to countywide policies that could indirectly result in the creation of runoff that would exceed the capacity of existing or planned stormwater drainage systems or provide additional sources of polluted runoff.	Less Than Significant	None required	Less Than Significant
Impact 3-11-5 **Solar**	Implementation of the proposed Program could result in the creation of runoff that could result in flooding.	Less Than Significant	None required	Less Than Significant
Impact 3-11-5 **Wind**	Implementation of the proposed Program could result in the creation of runoff that could result in flooding.	Less than Significant	None required	Less than Significant
Impact 3-11-5 **Policy Changes**	Implementation of the proposed Program could result in changes to countywide policies that could result in flooding.	Less Than Significant	None required	Less Than Significant
Impact 3-11-6 **Solar**	Implementation of the proposed Program could place within a 100-year Flood Hazard Area structures that would impede or redirect flood flows.	Less Than Significant	None required	Less Than Significant
Impact 3-11-6 **Wind**	Implementation of the proposed Program could place within a 100-year Flood Hazard Area structures that would impede or redirect flood flows.	Less Than Significant	None required	Less Than Significant

Impact		Level of Significance Without Mitigation	Mitigation Measure	Resulting Level of Significance
Impact 3-11-6 **Policy Changes**	Implementation of the proposed Program could result in changes to countywide policies that could indirectly result in placement within a 100-year Flood Hazard Area structures that would impede or redirect flood flows.	Less Than Significant	None required	Less Than Significant
Impact 3-11-7 **Solar**	Implementation of the proposed Program could result in an adverse effect on the service capacity or operations of a community water service provider.	Less Than Significant	None required	Less Than Significant
Impact 3-11-7 **Wind**	Implementation of the proposed Program could result in an adverse effect on the service capacity or operations of a community water service provider.	Less Than Significant	None required	Less Than Significant
Impact 3-11-7 **Policy Changes**	Implementation of the proposed Program could result in changes to countywide policies that could indirectly result in an adverse effect on the service capacity or operations of a community water service provider.	Less Than Significant	None required	Less Than Significant
Resources Determined to Have Insignificant Impact				
Population and Housing	The Program does not include a residential component that would directly or indirectly induce new population growth. Additionally, renewable energy projects that may be developed under the Program would not generate substantial employment opportunities resulting in a need for new housing.	Insignificant	None required	Insignificant
Public Services	The Program would not result in population growth, and thus demand for public services such as schools, parks, and emergency services would not be affected.	Insignificant	None required	Insignificant

Impact	Level of Significance Without Mitigation	Mitigation Measure	Resulting Level of Significance
Transportation and Traffic The renewable energy project types considered under the Program do not generate substantial traffic or otherwise impact transportation infrastructure. The greatest traffic impact would be during construction of future projects proposed under the Program, and these impacts would be insignificant and temporary.	Insignificant	None required	Insignificant

ES4 PROGRAM ALTERNATIVES SUMMARY

CEQA Guidelines Section 15126.6 requires that an EIR describe a range of reasonable alternatives to the Program that could feasibly attain the basic objectives of the project and avoid and/or lessen the environmental effects of the project. Further, CEQA Guidelines Section 15126.6(e) requires that a "no project" alternative be evaluated in an EIR. Section 4.0, Alternatives, provides a detailed discussion and a qualitative analysis of the following scenarios:

Alternative 1: Limited Combining Designation Scope

Alternative 1 consists of an RE Combining Designation that is more limited in scope than that of the proposed RESP by limiting projects to rooftop and structure-mounted projects, and ground-mounted projects of 40 acres or less. This alternative would also limit streamlining (i.e., ministerial approvals) to only those projects that could be fully screened from public view adjacent to a project site and would require that Tier 1 ground-mounted SEFs not be located on Important Agricultural Soils. The intent of this alternative is to reduce the Program's Class I impacts for aesthetics, agricultural resources, and land use and planning, and reduce overall impacts to other resource areas by substantially reducing the maximum allowed project footprint.

Alternative 2: Smaller Combining Designation Footprint

Alternative 2 consists of a RE Combining Designation that excludes all land with Important Agricultural Soils. This would reduce the total acreage of the RE Combining Designation from 801,910 acres to approximately 483,570 acres, a reduction of approximately 40 percent. The sole intent of this alternative is to reduce the potential for Class I impacts associated with the conversion of agricultural land to nonagricultural uses, identified in Sections 3.2 and 3.9. All other aspects of the Program as proposed would remain unchanged.

Alternative 3: No Project

Alternative 3 is the CEQA-mandated No Project Alternative. Under Alternative 3, existing policies governing renewable energy development in the county would remain in place. Environmental impacts may be reduced in some instances because all projects would be evaluated individually and with potentially greater scrutiny. However, Alternative 3 could also result in more cumbersome permitting processes with less certain outcomes, thus resulting in less renewable energy development than would occur under the proposed Program.

ES5 AREAS OF CONTROVERSY/ISSUES TO BE RESOLVED

The County of San Luis Obispo is as the lead agency for the proposed Program. In accordance with CEQA Guidelines Section 15082, the County prepared and distributed a Notice of Preparation (NOP) for the proposed Program that was circulated for public review on April 23, 2014. Concerns raised in response to the NOP were considered during preparation of the EIR. The NOP and a copy of each letter are provided in **Appendix 1.0** of this EIR. Section 1.0, Introduction, provides a summary of issues and areas of concern related to the proposed Program, as presented to the County by agencies and the public during the NOP review period.

1.0 Introduction

This Environmental Impact Report (EIR) was prepared in accordance with the California Environmental Quality Act (CEQA), the State CEQA Guidelines, and San Luis Obispo County's local CEQA Guidelines. The County of San Luis Obispo (County) is the lead agency for the environmental review of the Renewable Energy Streamlining Program (Program or RESP) evaluated herein and has the principal responsibility for approving the project. This EIR assesses the expected environmental impacts resulting from adoption and subsequent implementation of the proposed Program.

1.1 PURPOSE OF THE EIR

The County, acting as the lead agency, prepared this EIR to provide the public and responsible trustee agencies with information about the potential environmental effects of the proposed RESP. As described in State CEQA Guidelines Section 15121(a), the EIR is a public informational document that (1) assesses potential environmental effects of the RESP, and (2) identifies alternatives and mitigation measures to the RESP that could reduce or avoid its adverse environmental impacts. 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.

CEQA requires the preparation of an environmental impact report 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 RESP, the County has determined that the Program is a "project" within the definition of CEQA.

1.2 RESPONSIBLE AND TRUSTEE AGENCIES

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 RESP and may be a trustee agency for the Program:

- California Department of Fish and Wildlife, Region 4
- State Lands Commission
- California Department of Parks and Recreation

In CEQA, the term *responsible agency* includes all public agencies other than the lead agency that may have discretionary actions associated with the implementation of the RESP or an aspect of the Program. Since potential future implementation decisions may occur many years after the Program has been adopted and implemented, they cannot be known with certainty. However, based on the potential for the following agencies to have a role in the implementation of the RESP, they are identified as potential responsible agencies:

- San Luis Obispo County Air Pollution Control District (APCD)
- California Department of Conservation
- California Department of Forestry and Fire Protection/SLO County Fire Department (Cal Fire)
- California Geologic Survey (CGS)

- California Department of Parks and Recreation
- California Department of Water Resources
- California Energy Commission (CEC)
- California Department of Resources Recycling and Recovery (CalRecycle)
- California Native American Heritage Commission
- California Public Utilities Commission
- California Resources Agency
- California State Lands Commission
- California Transportation Commission
- California Department of Transportation District 5, Environmental Planning and Engineering (Caltrans)
- Caltrans, Division of Aeronautics
- Central Coast Regional Water Quality Control Board, Region 3 (RWQCB)
- City of Arroyo Grande
- City of Atascadero
- City of Grover Beach
- City of Paso Robles
- City of Pismo Beach
- City of San Luis Obispo
- Local Agency Formation Commission of San Luis Obispo County (LAFCo)
- US Army Corps of Engineers (USACE)
- US Bureau of Land Management (BLM)
- US Bureau of Reclamation
- US Environmental Protection Agency (EPA)
- US Fish and Wildlife Service (USFWS)
- US Forest 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 follows:

> *A program EIR is an EIR, which may be prepared on a series of actions that can be characterized as one large project and are related either:*
>
> *(1) Geographically,*
>
> *(2) A logical part in the chain of contemplated actions,*

(3) In connection with issuance of rules, regulations, plans or other general criteria to govern the conduct of a continuing program, or

(4) 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.

The environmental impacts are assessed at a "program" level of detail, because site-specific development plans or other project-level details are not a component of the proposal. Rather, the EIR evaluates indirect impacts that are reasonably foreseeable given proposed changes to County policies affecting renewable energy project review and entitlement processes.

1.4 SCOPE AND ORGANIZATION

This EIR includes all notices and other procedural documents pertinent to the EIR, as well as all technical material prepared to support the analysis. Sections 15122 through 15132 of the State CEQA Guidelines 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 project, environmental documentation for nearby projects, agency consultation, and review of the project and responses to the Notice of Preparation (NOP).

This EIR includes an Executive Summary, seven chapters, and appendices. The purpose of each section is as follows:

EXECUTIVE SUMMARY

The Executive includes a summary of the EIR process, the main components of the proposed Program and alternatives, a discussion of the key impact findings, and a table that summarizes each of the impacts of the proposed Program.

SECTION 1.0 – INTRODUCTION

Section 1.0 provides an introduction and overview describing the intended use of the EIR and the review and certification process.

SECTION 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 Section 15124). The "project" analyzed in this EIR is the Renewable Energy Streamlining Program. This section includes a description of the proposed project location and geographic characteristics of the project area; objectives of the RESP; a general description of the project's technical, economic, and environmental characteristics; intended uses of the EIR; and the discretionary actions associated with the RESP.

SECTION 3.0 – ENVIRONMENTAL SETTING, IMPACTS, AND MITIGATION MEASURES

Section 3.0 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 RESP that provide mitigation for any identified potentially significant impacts, and if necessary, recommends mitigation measures to reduce potentially significant environmental impacts.

Wherever possible, this EIR references specific RESP goals, policies, and implementation strategies that will serve to mitigate the impacts of RESP implementation. The RESP 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 section:

- Aesthetics and Visual Resources
- Agricultural Resources
- Air Quality
- Biological Resources
- Cultural Resources
- Geology and Soils
- Greenhouse Gases and Climate Change
- Hazards and Hazardous Materials
- Land Use and Planning
- Noise
- Water Resources

This section also provides a summary of Effects Determined Insignificant (Section 3.12) that includes discussions of traffic and transportation, population and housing, solid waste, wastewater, police, fire protection, parks, and schools.

SECTION 4.0 – PROJECT ALTERNATIVES

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

SECTION 5.0 – OTHER CEQA ANALYSIS

This chapter contains discussions and analysis of various topical issues mandated by CEQA. These topics include significant environmental effects that cannot be avoided if the project is implemented, as well as growth-inducing impacts and a discussion of energy consumption consistent with Appendix F of the State CEQA Guidelines.

SECTION 6.0 – REPORT PREPARERS

This section provides a list of persons who contributed to the preparation of the EIR.

SECTION 7.0 – ABBREVIATIONS

This section provides a list of abbreviations used in the document.

APPENDICES

This section includes technical documents referenced in the EIR.

1.5 ENVIRONMENTAL REVIEW PROCESS

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

NOTICE OF PREPARATION

In accordance with Section 15082 of the State CEQA Guidelines, the County circulated a Notice of Preparation (NOP) of an EIR beginning April 23, 2014, and ending May 28, 2014. The NOP was circulated to the public, local, state, and federal agencies, and other interested parties to solicit comments on the proposed project. The County also held two public scoping meeting sessions on May 1, 2014, to receive comments. Concerns raised in response to the NOP and at scoping meetings were considered during preparation of the EIR.

Table 1.0-1 lists the NOP comment letters received, the key issues raised in the comment letter, and the section of this EIR where the comments are addressed. The NOP and copies of the NOP comment letters are included in **Appendix 1.0**.

TABLE 1.0-1
NOP COMMENT LETTERS

Comment Letter	Key Issues	Section Where Issues Are Addressed
San Luis Obispo County Air Pollution Control District	• Lists diesel idling restrictions near sensitive receptors. • Outlines items that should be included in air quality impact analysis, based on the 2012 CEQA Air Quality Handbook. • Recommends that alternatives analyses include the same level of air quality analysis.	3.3 Air Quality
California Department of Forestry and Fire Protection (Cal Fire)	• Recommends that the EIR thoroughly examine the impact the revision of the Williamson Act Rules of Procedure would have on the net amount of productive rangeland. • Recommends that the EIR consider mitigations that address the biological constraints that may prevent land from being returned to range use after the renewable energy generating uses are out of use. • Recommends that the EIR promote options that	3.2 Agricultural Resources

Comment Letter	Key Issues	Section Where Issues Are Addressed
	allow for multiple-benefit land uses, such as those that generate solar power while simultaneously allowing for grazing. • The Range Management Advisory Committee suggests that renewable energy uses be conditional based on the involvement/approval of a Certified Range Manager or that permit approval is conditional based on the inclusion of mitigations to avoid permanent loss of productive rangeland.	
California Department of Fish and Wildlife (CDFW)	• Recommends evaluating those projects deemed ministerial under the program EIR to be evaluated at a level of detail sufficient to accurately identify the direct, indirect, and cumulative effects of such projects. • SLO OCTS identifies locations where development of renewable energy resources can most feasibly be developed without adversely impacting biological resources; however, it should be noted that most areas of the county have not been systematically or recently surveyed, and where biological surveys have occurred, results are not available. • Although OCTS may be a useful screening tool, due to misinterpretations of county maps within the document, the CDFW recommends that only on-the-ground surveys be used to identify if sensitive resources are found in a particular area. • The CDFW makes several recommendations to avoid and minimize impacts to wildlife associated with Program implementation.	3.4 Biological Resources
City of San Luis Obispo	• Identifies how site-specific impacts could be sufficiently evaluated and/or mitigated within a PEIR and how subsequent review would be adequately facilitated for the range of projects and site locations which could be proposed under the streamlining program for ministerial review. Recommends that the EIR address environmental impacts and potential policy inconsistencies with relevant City General Plan policies. • Recommends that the Hazards section of the PEIR address potential impacts from thermal plumes, light, or obstructions to airspace that may interfere with aircraft operations. • Air Quality and GHG emissions sections should address potential impacts of removal of carbon-sequestering vegetation to accommodate new renewable energy facilities. • Aesthetics section should address potential impacts to views from identified scenic highways. • In addition to the state mandated "no project"	2.0 Project Description 3.8 Hazards and Hazardous Materials 3.3 Air Quality 3.1 Aesthetics and Visual Resources 4.0 Alternatives

Comment Letter	Key Issues	Section Where Issues Are Addressed
	alternative, the environmental review should include alternatives which establish a range of performance standards and review criteria based on the potential of a project to conflict with City policies and standards.	
Native American Heritage Commission (NAHC)	NAHC lists recommended actions to adequately assess and mitigate project-related impacts to archaeological resources. Such actions include (but are not limited to): • Contacting appropriate regional archaeological Information Center for a record search to determine if the area of potential effect (APE) has been previously surveyed for cultural resources and if any known cultural resources have already been recorded on or adjacent to the APE. • Contacting the NAHC for a Sacred Lands File Check and a list of appropriate Native American contacts for consultation concerning the project site.	3.5 Cultural Resources
County of San Luis Obispo Department of Agricultural Weights and Measures	Recommends that the EIR address the following issues: • Conversion of agricultural resources to nonagricultural uses. • Impacts to on- and off-site agricultural resources and/or operation. • Williamson Act compatibility.	3.2 Agricultural Resources
Bill Edwards, PE, Senior Project Manager, REC Solar	Recommends creating three RE zoning designations, in which one area requires a formal hearing, a second an Administrative Decision, and a third area a permitted use which can go straight to building permit. Also, recommends that the Land Use Ordinance revisions be comprehensive enough that zoning allows for permitted use in some areas.	3.9 Land Use and Planning
California Native Plant Society	Asks that no individual projects covered under the EIR be approved unless there has been a botanical survey by a qualified botanist to determine whether any special-status plant species have the potential to occur.	3.4 Biological Resources

DRAFT EIR AND PUBLIC NOTICE/PUBLIC REVIEW

The Draft EIR shall provide a description of the project, a description of the environmental setting, identification of project impacts, and mitigation measures for impacts found to be significant, as well as an analysis of project alternatives. Upon completion of the Draft EIR, the County 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, the County will provide public notice of the availability of the Draft EIR for public review and invite comment from the public, agencies, organizations, and other interested parties. The public review and comment period will be no less than 45 days. During this period, public

comment on the Draft EIR will be accepted via mail, e-mail and, as applicable, orally at any public meetings held on the project. Notice of the time and location of any such public meetings will be published prior to the meeting. All comments or questions regarding the Draft EIR should be addressed to the County as noted below.

James Caruso, Project Manager
San Luis Obispo County
Department of Planning and Building
976 Osos Street, Room 200
San Luis Obispo, CA 93408
E-mail: jcaruso@co.slo.ca.us

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. Commenting parties will be provided with copies of the responses to their comments at least 10 days prior to EIR certification.

CERTIFICATION OF THE EIR/PROJECT CONSIDERATION

The County Planning Commission will review the RESP and EIR and provide a recommendation to the County Board of Supervisors. As the final decision-maker regarding the RESP, the County Board of Supervisors (Board) will review and consider the Final EIR. If the Board finds that the Final EIR is "adequate and complete," it will certify the Final EIR.

Upon review and consideration of the Final EIR, the County of San Luis Obispo Board of Supervisors may take action to adopt, revise, or reject the RESP. A decision to approve the project would be accompanied by written findings in accordance with State CEQA Guidelines Sections 15091 and 15093.

2.0 Project Description

San Luis Obispo County has prepared a Renewable Energy Streamlining Program (Program, or RESP) that is intended to encourage and streamline permitting of certain renewable energy projects in the most suitable locations in the unincorporated area of the county. This would be formalized through County ordinance revisions and associated updates to County policies. These draft revisions can be found in **Appendix 2.0.**

The Program includes a new Renewable Energy (RE) Combining Designation to identify the most suitable locations for renewable energy development. Section 22.14.010 of the San Luis Obispo County Land Use Ordinance (LUO) defines a combining designation as:

> *"Combining designations are used to identify and highlight areas of the county having natural or built features which are sensitive, hazardous, fragile, of cultural or educational value, or of economic value as extractable natural resources. The purpose of combining designation standards is to require project design that will give careful consideration to the land features, structures and activities identified by the combining designations. These standards provide for more detailed project review where necessary to support public safety or proper use of public resources."*

The Program also includes revisions to the County's General Plan, LUO, and Williamson Act Rules of Procedure to support siting, review, and permit streamlining of distributed generation renewable energy facilities, including rooftop solar and wind facilities, solar-covered parking lots and small wind generators. The Program focuses only on the inland area of the county and does not include the Coastal Zone.

This programmatic environmental impact report (PEIR) is intended to support streamlining of on-site facilities as well as eligible renewable energy projects in the RE Combining Designation areas. No specific renewable energy development projects are being proposed or approved as part of this environmental review and subsequent consideration of Program adoption.

2.1 APPLICANT

County of San Luis Obispo Planning and Building Department
976 Osos Street, Room 200
San Luis Obispo, CA 93408

2.2 PROGRAM SETTING

San Luis Obispo County is located along California's Central Coast. 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 encompasses a total area of 3,616 square miles. Of this total area, 3,304 square miles are land and 311 square miles are water. The county's coastline spans 96 miles.

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, primarily for livestock grazing. Land in the county is also actively farmed and harvested. Most of the county's remaining land is used for rural land uses and open space. Rural land uses are distributed throughout the county. In the county's central area, the southern portion consists of large open space areas. Urban land uses and incorporated cities comprise less than 10 percent of the county's land, including residential, public facility, recreation, commercial, office, or multi-use land uses. Current development patterns are often dominated by low-density automobile-oriented development outside of the urbanized areas.

San Luis Obispo County consists of unincorporated land, unincorporated communities, and seven incorporated cities. 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, Halcyon, Heritage Ranch, Los Osos/Baywood Park, Nipomo, Oceano, San Simeon, Santa Margarita, San Miguel, Shandon, and Templeton. The urban areas in the county are linked to the primary transportation corridors serving the region, including Interstate Highways 1 and 101 and State Route 46, in addition to other corridors such as State Route 227. The city of San Luis Obispo and the city of Paso Robles both serve as major county centers for employment, entertainment, education, and shopping activities of the region (**Figure 2.0-1**).

The County has jurisdictional authority over unincorporated, non-federal lands. Incorporated cities within the county maintain jurisdictional control within respective city boundaries. For unincorporated areas within city spheres of influence, the County coordinates with relevant jurisdictions but maintains jurisdictional authority. Of 2,124,248 total acres of land countywide, San Luis Obispo County operates jurisdictional control over 1,470,784 acres of unincorporated land.

For purposes of the Program, the project area consists of unincorporated areas under County jurisdiction, exclusive of the Coastal Zone. Approximately 1,049,134 acres of unincorporated land is included in the Program. These lands are located throughout the county's regions, as shown in **Figure 2.0-2**.

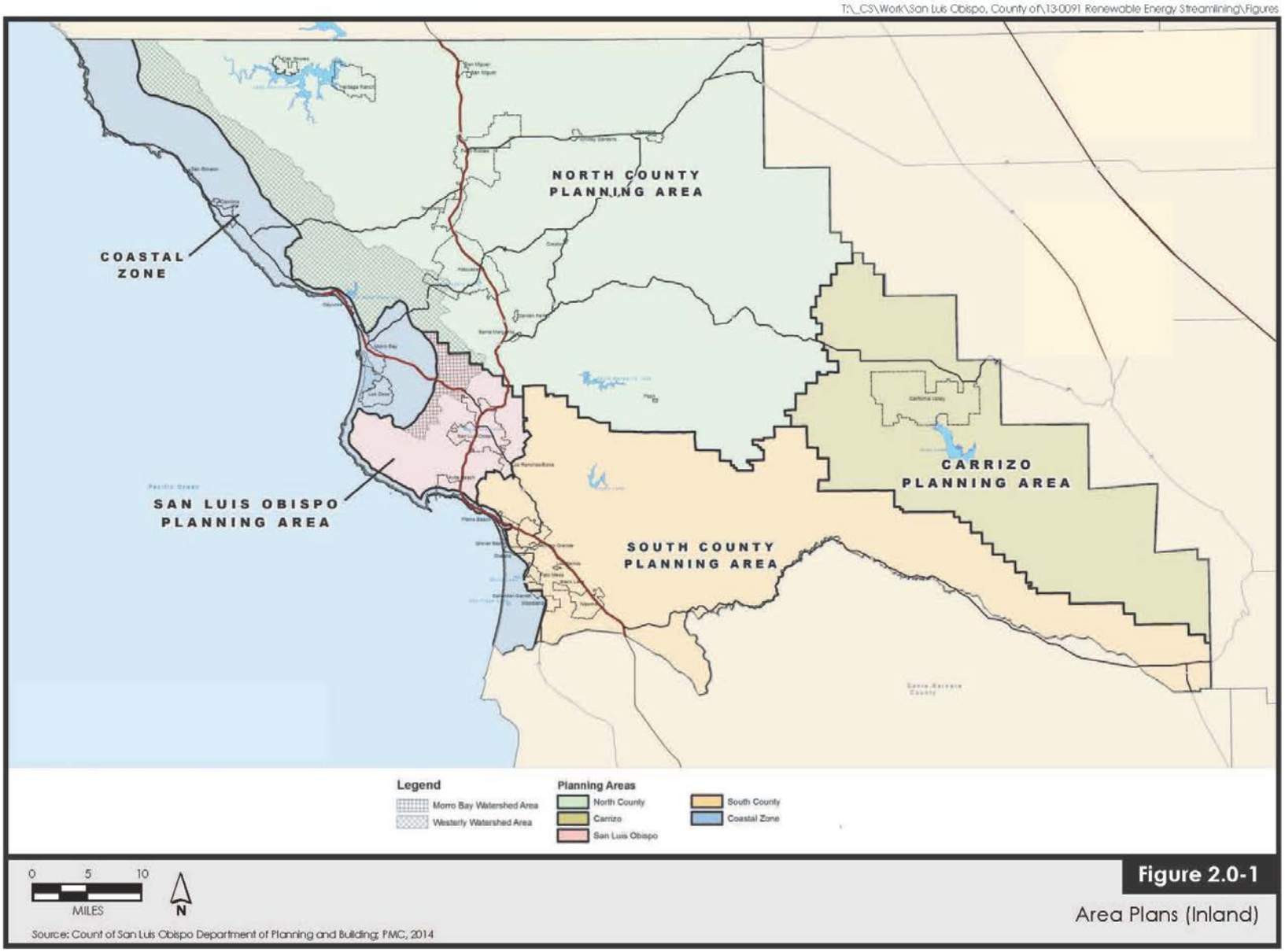

Figure 2.0-1
Area Plans (Inland)

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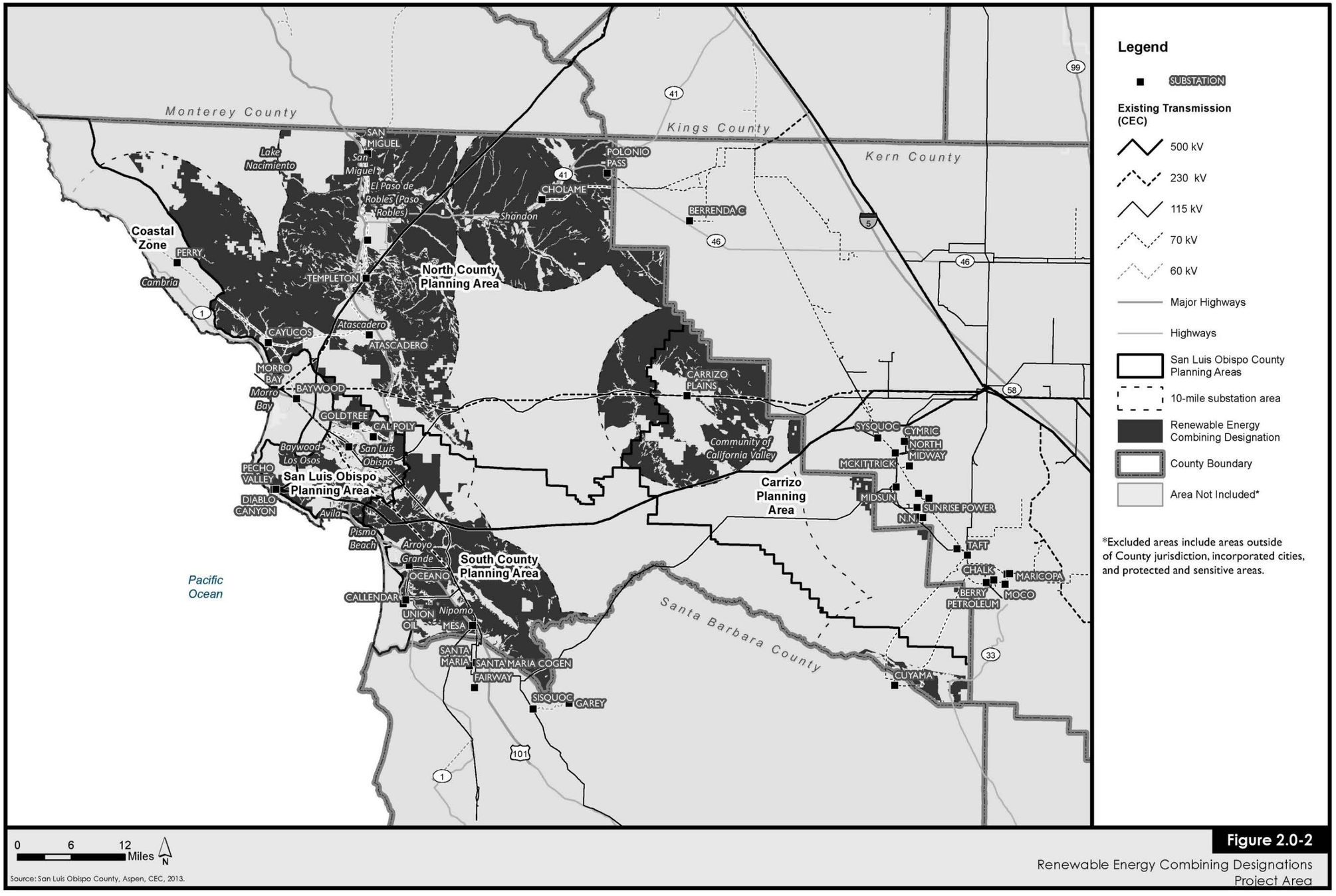

Figure 2.0-2

Renewable Energy Combining Designations Project Area

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2.3 SAN LUIS OBISPO COUNTY PLANNING FRAMEWORK

The existing San Luis Obispo General Plan, Land Use Ordinance, and other implementing ordinances currently guide the land uses in the unincorporated county. Section 3.9, Land Use and Planning, provides an analysis of the Program's consistency with applicable County planning documents. The county is first divided into Coastal and Inland areas. Within each of these areas, it is further divided into planning areas or Area Plans. The proposed project only affects land in the Inland Area Plans (project area).

The Area Plans (Inland) is divided into the following: Carrizo, North County, San Luis Obispo, and South County (**Figure 2.0-2**). The following is a general description of each of the four Inland planning areas as excerpted from the introduction section of The Area Plans (Inland):

- **Carrizo Planning Area**. The Carrizo Planning Area consists of the Carrizo Plain and Rafael/Big Springs watersheds. It is bordered by Kern County to the east, the Cuyama Valley to the south, and the Los Padres National Forest to the west. This area consists of undulating terrain devoted almost exclusively to the agricultural uses of dry farming and rangeland, which traditionally have been the principal industry and the foundation of the rural lifestyle and image of the region.

- **North County Planning Area**. The North County Planning Area includes the unincorporated areas north of the Cuesta Ridge to Monterey County and is bounded by the Coastal Zone to the west and Kern County to the east. It contains four unincorporated urban areas (San Miguel, Templeton, Santa Margarita, and Shandon), all located along Highway 101, and six village areas (Creston, Heritage Ranch, Oak Shores, Garden Farms, Whitley Gardens, and Pozo). The North County Planning Area is experiencing diverse economic growth in all sectors, including agriculture, which traditionally has been the principal industry and the foundation of the rural lifestyle and image of the North County. Much of the new development is increasingly oriented to commuter and retirement living, light industry, service businesses, and tourism.

- **San Luis Obispo Planning Area**. The San Luis Obispo Planning Area includes most of Montana de Oro State Park, as well as Cuesta College, Camp San Luis Obispo, and the California Men's Colony. It is bounded by the Coastal Zone to the west and the Los Padres National Forest to the east. The southern portion of the planning area includes the Irish Hills, See Canyon, and Squire Canyon. It contains the rural areas surrounding the city of San Luis Obispo, the inland portion of the Avila Beach urban area, and the village of Los Ranchos/Edna.

- **South County Planning Area**. The South County Planning Area generally consists of the land south of the Cuesta Grade to the Santa Barbara county line, between the Coastal Zone and the Carrizo Plain. Land uses within this large area are diverse, ranging from urban and suburban development in the incorporated cities and older town sites to rural residential and agricultural uses in the foothill and Nipomo Mesa areas, and the scenic and natural characteristics of the coastal ridges and Los Padres National Forest.

Area Plans and standards address each of the four planning areas within the General Plan, and each of the Area Plans is required to be consistent with the overall General Plan. The Area Plans also provide maps showing detailed overlays of environmental concern or resource protection called combining designations. This overlay distinction requires special design and/or development considerations to provide more detailed review when necessary for environmental issues such as sensitive habitats, flood hazards, and other natural resources.

The Inland Land Use Ordinance (Title 22) governs land use in the area affected by the project. Title 22 provides specific land use definition, standards, and thresholds consistent with the General Plan and the four Area Plans. The Program proposes a new Renewable Energy Combining Designation (RE). The intent of the new RE Combining Designation is to allow streamlined development of qualifying renewable energy projects. To implement the key elements of the Program, they would be integrated into the County's LUO (Inland).

Both the Land Use and Circulation Element (LUCE) and the Conservation and Open Space Element (COSE) will also be amended to support the Program.

2.4 AREAS UNDER THE JURISDICTION OF OTHER AGENCIES

Geographic areas that are controlled by agencies other than the County are not generally subject to the provisions in the County's General Plan and implementing ordinances and similarly would not be subject to the Program. These areas typically have their own distinct planning process and land use guidelines/policies.

2.5 PROGRAM OBJECTIVES

The primary objectives of the Program are to:

- Create a Renewable Energy (RE) Combining Designation that identifies locations where certain renewable solar electric facilities will qualify for permit streamlining if they meet specified standards and conditions for project size, site characteristics, and environmental protections.

- Revise the Land Use Ordinance to foster permit streamlining for other specified types of renewable energy facilities throughout the non-Coastal Zone portions of the unincorporated county (both within and outside of the RE Combining Designation).

- Support achievement of the County's goal to increase the production of renewable energy from small- and commercial-scale energy installations to account for 10 percent of total local energy by 2020 as presented in the County EnergyWise Plan.

- Provide a clear process and expectations for renewable energy projects in suitable locations that minimize environmental impacts.

2.6 PROGRAM COMPONENTS AND CHARACTERISTICS

The two main components of the Program are:

1) A new Renewable Energy (RE) Combining Designation that identifies locations where certain solar electric facilities (SEF)[1] will be afforded permit streamlining if they meet specified standards and conditions for project size, site characteristics, and environmental protections.

[1] A solar electric facility (SEF) is any solar electric system including the components and subsystems that, in combination, convert solar energy into electric energy suitable for use.

2) Revisions to the Land Use Ordinance that foster permit streamlining for specified types of renewable energy facilities throughout the project area (both within and outside of the RE Combining Designation), including small-scale roof-mounted wind energy conversion systems (WECS),[2] and SEFs less than 20 acres, and accessory renewable energy facilities that provide power to on-site uses only.

The changes to the General Plan, as well as the amendments to Title 22, are summarized in this project description. The specific revisions are included as **Appendix 2.0** and are considered a necessary companion piece to the description of the Program contained in this chapter.

2.6.1 RENEWABLE ENERGY COMBINING DESIGNATION AND STANDARDS

Areas included in the RE Combining Designation are those that are most conducive to streamlining permits for SEFs. The RE Combining Designation maps (**Figures 2.0-3** through **2.0-6**) include inland, unincorporated county areas under the County's jurisdiction without any of the following resource issues or characteristics:

- Location within a visual Sensitive Resource Area (SRA)
- Location within certain Highway Corridor Design Standard areas
- Areas covered by conservation easements
- Areas that have been or are intended for preservation for unique biological values
- Parcels in the Recreation (REC) and Open Space (OS) land use categories
- Any areas beyond a 10-mile distance from an existing substation
- Areas with Class I or Class II irrigated soils

The maps also show 5- and 10-mile radii around existing electricity substations, as renewable energy projects are most likely to be located where electricity distribution tie-ins are most readily available, feasible, and cost-effective.

The mapping identifies areas where renewable energy projects could occur, but not necessarily where they will occur. Because the exact location of projects is unknown the EIR evaluates potential environmental impacts at a programmatic level. Provisions of the program that regulate site characteristics, as well as the requirements of the LUO, will govern the potential for a project to occur in a specific location or whether the project qualifies for the program. Section 22.14.100 of the proposed Land Use Ordinance identifies project site characteristics that would trigger additional studies or standards that must be achieved, often referred to as performance standards. For instance, the RE Combining Designation would require additional biological studies, setbacks, and/or mitigation when sensitive species such as the San Joaquin kit fox may be present.

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[2] A wind energy conversion system (WECS) is any device which converts wind energy to a form of usable energy or provides storage of wind energy including all equipment and accessory structures related to the system, including but not limited to wind turbines, mounting posts, on-site transmission lines, operations and maintenance buildings, and other related accessory structures.

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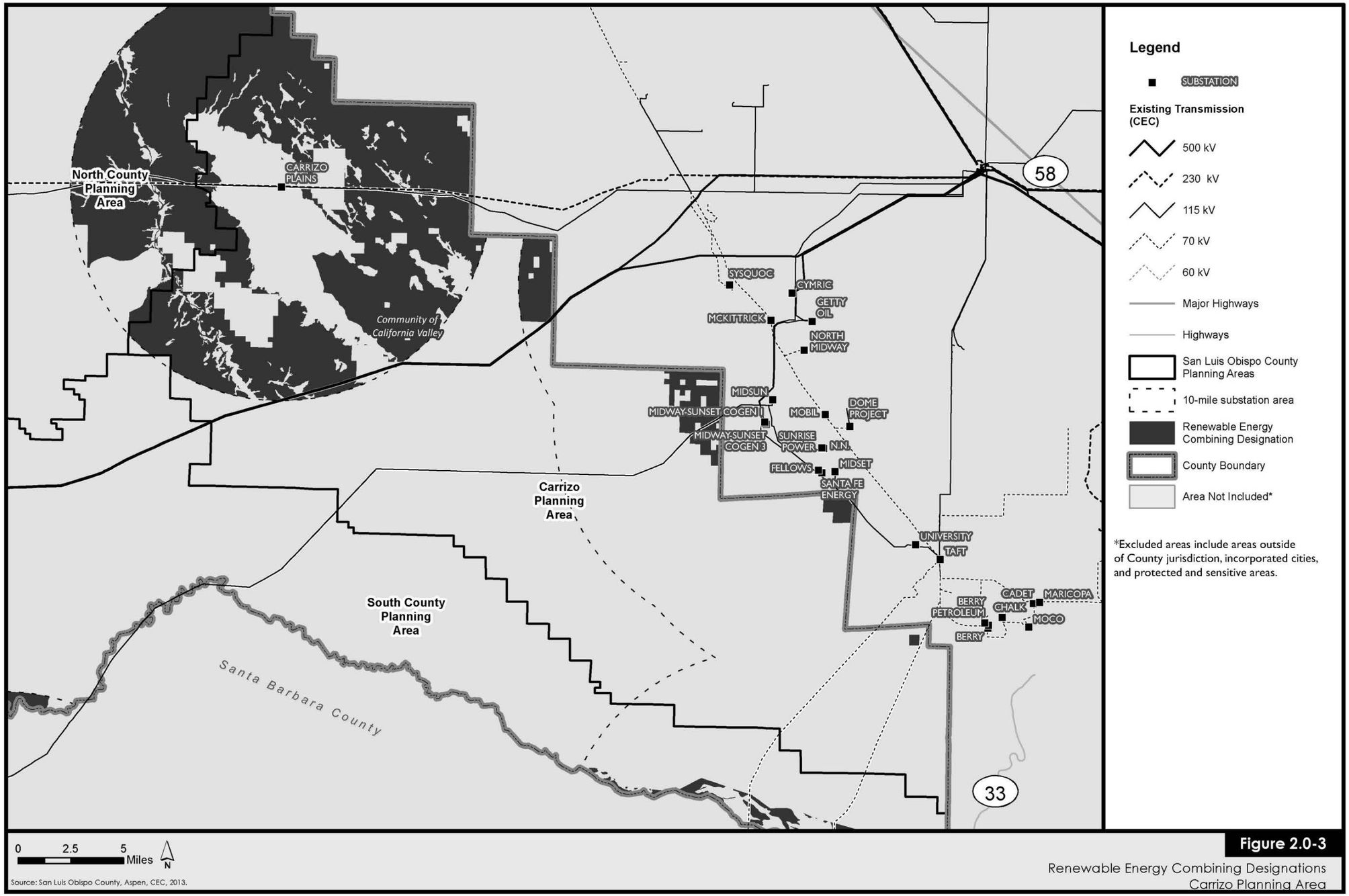

Figure 2.0-3
Renewable Energy Combining Designations
Carrizo Planning Area

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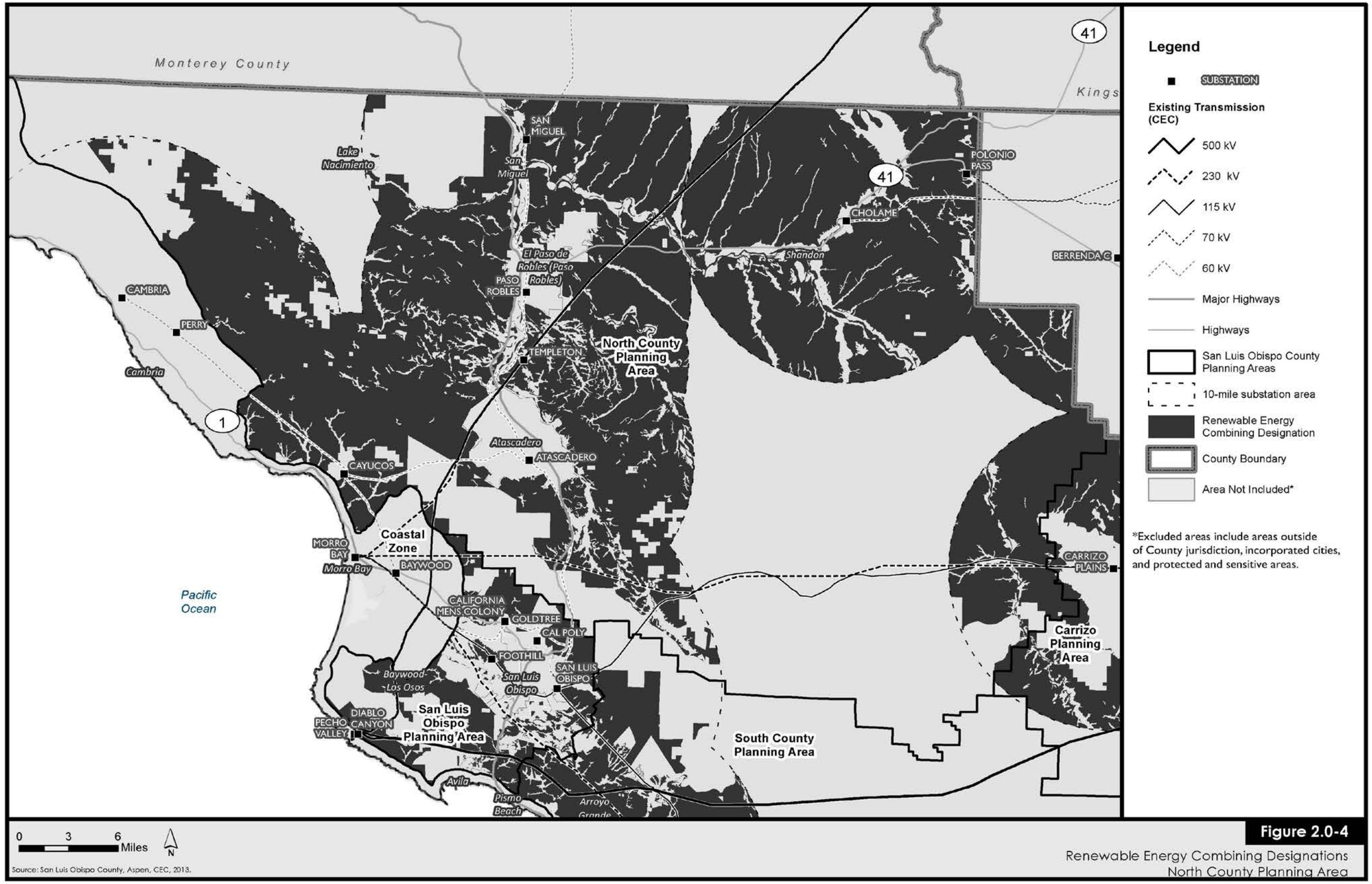

Figure 2.0-4

Renewable Energy Combining Designations
North County Planning Area

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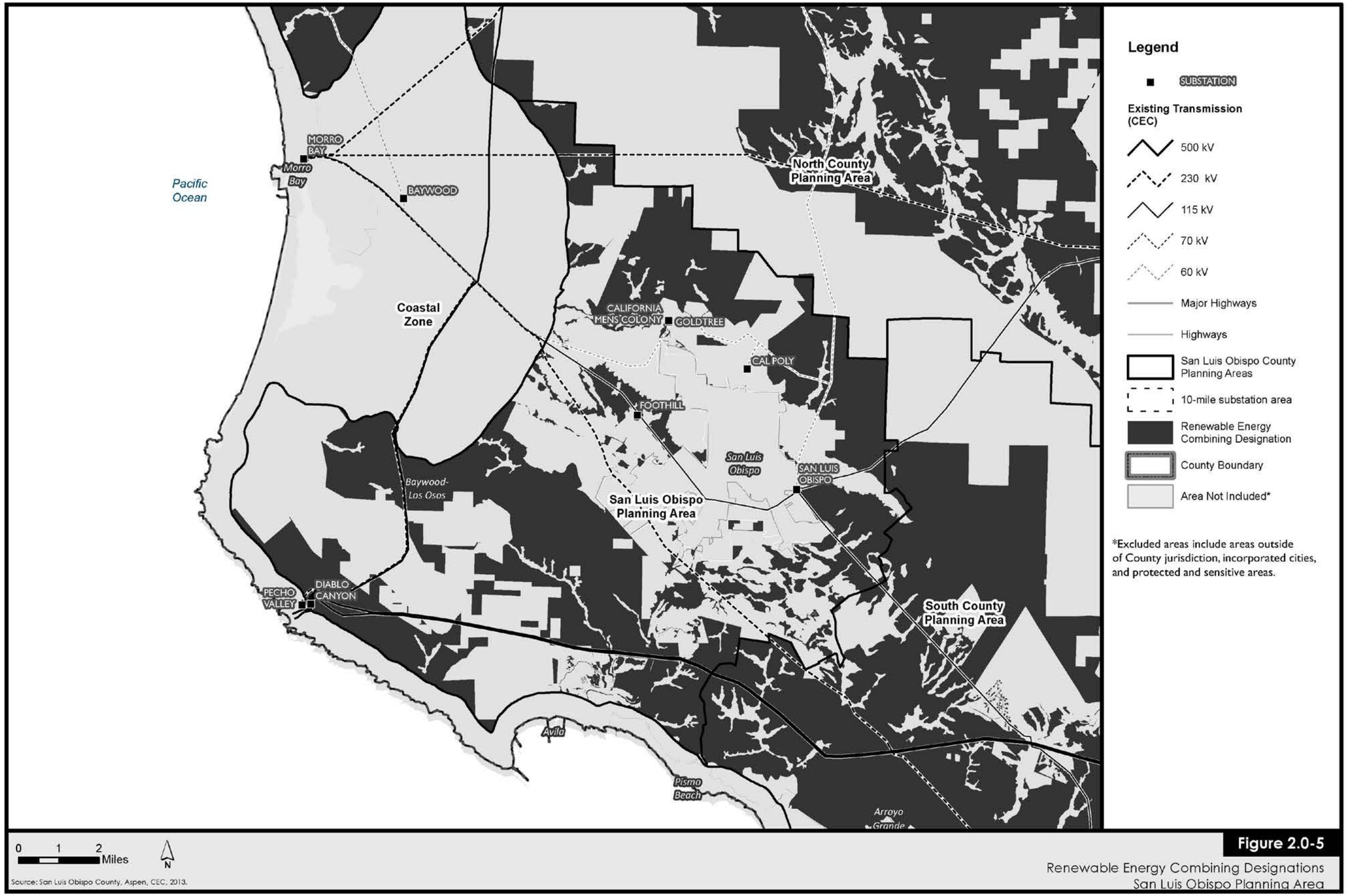

Figure 2.0-5

Renewable Energy Combining Designations
San Luis Obispo Planning Area

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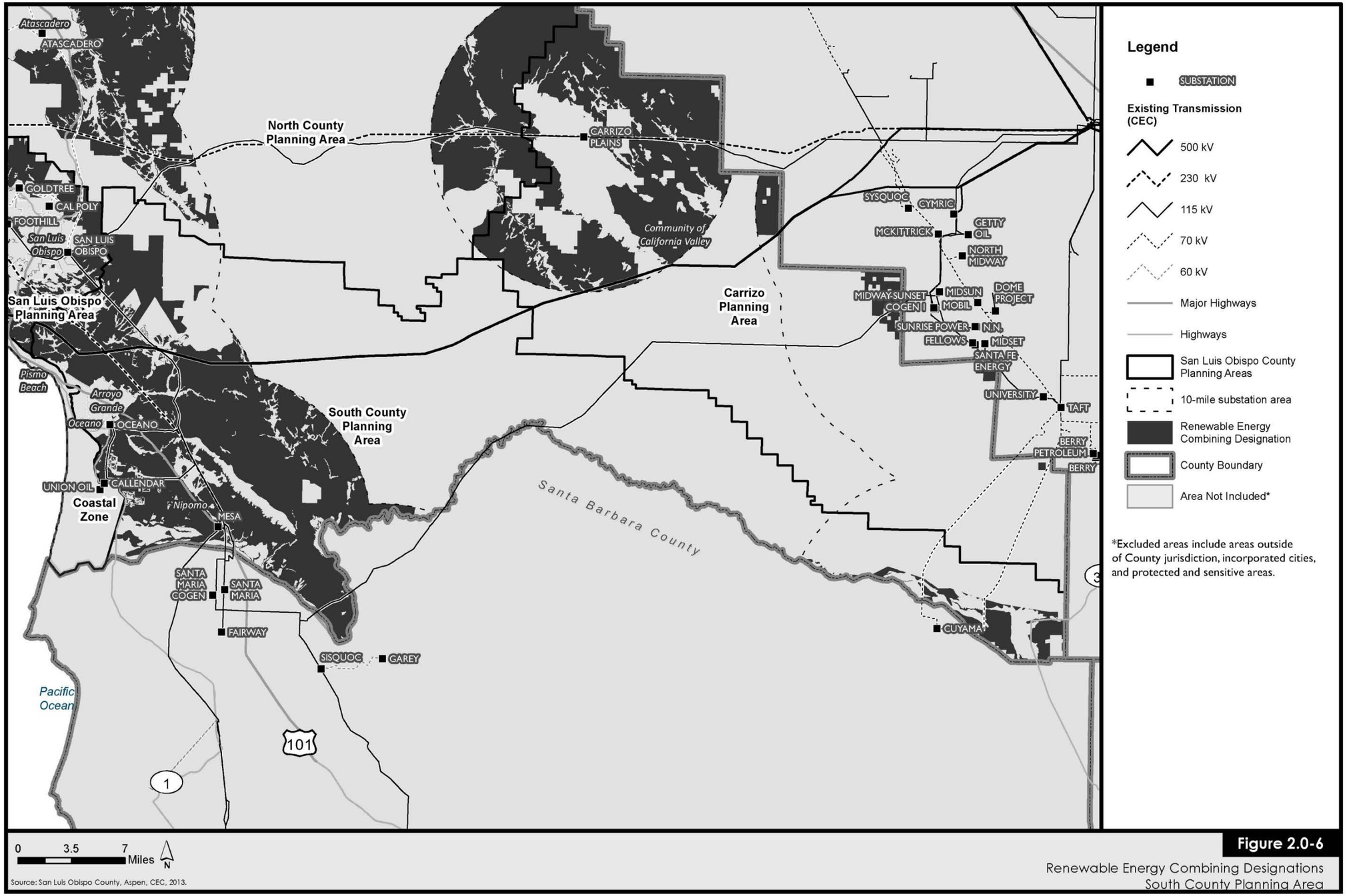

Source: San Luis Obispo County, Aspen, CEC, 2013.

Figure 2.0-6

Renewable Energy Combining Designations
South County Planning Area

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2.6.2 REVISIONS TO OTHER SECTIONS OF THE COUNTY LUO

Chapter 22.32 (Electric Generating Facilities) will also be updated to provide development standards and performance criteria for renewable energy technologies proposed throughout the project boundaries. These revisions include streamlined permit review for certain types of renewable energy facilities and foster greater clarity and transparency in the renewable energy entitlement process. New content in Chapter 22.32 would simplify and standardize the application and entitlement process for all SEFs and WECs countywide, both within and outside of the RE Combining Designation.

For instance, Chapter 22.32 would include new setbacks and development standards for ground-mounted wind energy conversion facilities. Updates to Chapter 22.32 and Article 8 would also provide greater certainty for other categories of renewable energy development and reduce barriers to permitting certain renewable energy technologies. The Program also includes changes to clarify the process to determine the level of discretionary permit requirements for renewable energy technologies.

Other minor ordinance and plan revisions include the following:

- Williamson Act Rules of Procedure: revisions to allowed uses of Table 2 to allow electric-generating plants (electricity generation)
- Framework for Planning, Part of I of the Land Use and Circulation Elements, as well as the Official Maps: amendments to establish and map the RE Combining Designation
- Article 9 and Article 10 of Title 22, Planning Area Standards and Community Planning Area Standards: revisions to remove prohibitions on electricity-generating uses that would otherwise fall within the RE Combining Designation
- Conservation and Open Space Element: minor updates to goals, policies, and glossary to ensure consistency of renewable energy definitions with new distributed generation and technology definitions in Title 22

2.6.3 SUMMARY OF PROGRAM STREAMLINING

The types of projects that would become eligible for permit streamlining as a result of the Program are summarized in **Table 2.0-1**. Streamlined reviews and approvals would be achieved either through the building permit process, zoning clearance process, or site plan review process, as specified in the table.

TABLE 2.0-1
PROJECTS ELIGIBLE FOR PERMIT STREAMLINING UNDER THE PROGRAM

Renewable Energy Project Class	Definition and Conditions	Permit Streamlining Afforded
Renewable energy-generating facility as an accessory use	An accessory renewable energy-generating facility that meets the following criteria: • Does not provide energy for sale to off-site uses. • Is not within an area designated Open Space (OS) or Recreation (REC). • Is not within an Airport Review, Flood Hazard, or Sensitive Resource Area Combining Designation.	Allowed by Building Permit as described in Chapter 22.32.

Renewable Energy Project Class	Definition and Conditions	Permit Streamlining Afforded
	• Is 21,780 square feet or less in area (exclusive of the total parcel area). • Is setback 100 feet from any adjacent property or public road. • Is proposed on a non-vacant parcel with an existing use or development on the property. • Is sited on Class I or Class II soils. • Is subject to environmentally-related permits.	
Tier 1 SEF, roof- or structure-mounted	Located on the roof or structure of a conforming use	Allowed with Zoning Clearance as described in Chapter 22.32.
Tier 1 SEF, ground-mounted	A solar electric facility that is 20 acres or less or less and meets the following: • Is not located on Class I or Class II soils, • Is ground-mounted, and • Is located on land that is graded, disturbed, or altered; or • Is located on land that was previously developed for industrial or commercial purposes and degraded or contaminated and then abandoned or underused.	Allowed with Site Plan Review as described in Chapter 22.32.
Tier 1 WECS	A wind energy conversion system that is mounted on a roof or structure of a conforming use located in one of the following land use categories: Agriculture (AG); Rural Lands (RL); Residential, Rural (RR); Commercial, Service (CS); Industrial (IND); Open Space (OS); or Public Facilities (PF).	Allowed with Zoning Clearance as described in Chapter 22.32.
Tier 2 SEF	A solar electric facility that is 40 acres or less in the Renewable Energy Combining Designation and meets the following: • Proposed on a parcel included in any land use category other than Open Space (OS) or Recreation (REC); and a. In the Agriculture (AG) land use category, is not sited on any type of Important Agricultural Soils as defined in the Conservation and Open Space Element, unless sited on Important Agricultural Soils designated as Highly Productive Rangeland Soils.	Allowed by Site Plan Review as described in Section 22.14.100.
Tier 3 SEF	A solar electric facility that is 160 acres or less in size in the Renewable Energy Combining Designation, and meets the following: • Proposed on a parcel included in the Commercial, Service (CS), Industrial (IND), or Agriculture (AG) land use categories (vacant or non-vacant). a. In the Agriculture (AG) land use category, is not sited on any type of Important Agricultural Soils as defined in the Conservation and Open Space Element, unless sited on Important Agricultural Soils designated as Highly Productive Rangeland Soils.	Allowed by Site Plan Review as described in Section 22.14.100.

2.6.4 ASSUMPTIONS FOR RENEWABLE ENERGY PROJECT BUILDOUT UNDER THE PROGRAM

As part of the County's comprehensive greenhouse gas reduction program directed by the Conservation and Open Space Element, the County EnergyWise Plan includes a goal to increase the production of renewable energy from small- and commercial-scale energy installations to account for 10 percent of total local energy by 2020. The County will report on progress toward its greenhouse gas reduction target and implementation of programs to

support the goals, including this renewable energy production goal, as part of implementation and monitoring for the EnergyWise Plan. For consistency with the County and state greenhouse gas emissions inventories and forecasts, projects that are eligible to count toward the County's goal are renewable energy projects in the unincorporated county that are obligated by renewable energy power purchase agreement contracts to meet the state's Renewables Portfolio Standard. This goal was used as a starting point in developing the renewable energy development assumptions used for analysis of the potential impacts resulting from Program implementation.

The calculation started by estimating 2020 energy demand in the county. Based on the California Energy Commission's 2013 Integrated Energy Policy Report Proceeding, Energy Demand 2014–2024 adopted forecast for the Pacific Gas & Electric (PG&E) territory, PG&E's 2024 high forecast is 132,510 gigawatt hours (CEC 2013).[3] San Luis Obispo County's load is 1.5 percent of the PG&E overall load.[4] This information was used to calculate 10 percent of the 2024 forecast to represent the local renewable energy likely to be developed consistent with the County's EnergyWise Renewable Energy goals. The result was 92 megawatts (MW) of renewable energy production in the county by 2024.[5]

In addition to the forecast load, the California Energy Demand forecast assumed 2,180 MW of installed self-generation photovoltaics (PV) in the overall PG&E territory by 2024 in the high demand case. Using San Luis Obispo County's 1.5 percent of the PG&E overall load would result in 32 MW of rooftop solar anticipated in the San Luis Obispo region. This brings the total anticipated renewable development to 125 MW. To be conservative in the impact analysis, the 125 MW estimate was increased 20 percent. Therefore, for purposes of environmental impact analysis, this EIR assumes the Program will result in a total of 150 MW of renewable energy projects.

While it is not possible to establish the exact proportion of the 150 MW that would be solar projects and wind projects, current renewable energy trends and the renewable resources in the county were considered. The renewable energy development assumes the majority of the 150 MW would be solar PV projects, with minor numbers of wind projects. For purposes of the EIR analyses, the total foreseeable land footprint assumed for development of these projects is 1,500 acres. Note that this does not represent a cap or limit on the amount of land that can be developed under the Program, but rather the total developed area anticipated using the above methodology. The construction and operational characteristics of typical projects that would be anticipated under the program are further described below.

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[3] The high forecast includes high economic and demographic projections, low energy price projects, and low-efficiency impact assumptions. It is a highest energy demand forecast presented in the report and is a conservative demand forecast.

[4] The county's load is 1,987.65 gigawatt-hours or 1,987,650 megawatt-hours. The 10 percent goal translates to 198,765 megawatt-hours or 92 megawatts. The megawatts were calculated using 2,150 hours per megawatt using the 2013 Integrated Energy Policy Report Draft Lead Commissioner Report Table 18 at http://www.energy.ca.gov/2013publications/CEC-100-2013-001/CEC-100-2013-001-LCD.pdf.

[5] The EnergyWise Plan's Renewable Energy goal is for local production of energy for local use goal, exclusive of the large-scale solar projects that support the state's overall Renewables Portfolio Standard (RPS). Utility-scale solar projects are not credited toward the local EnergyWise Plan goal but are counted toward the RPS. The EnergyWise Plan goal is for small-scale local production that powers uses in the county.

2.6.4.a Typical Characteristics of Renewable Energy Projects Developed Under the Program

Solar Electric Facilities (SEF)

Solar energy projects developed under the Program would include solar photovoltaic (PV) panels mounted on rooftops of other structures as well as ground-mounted systems. The maximum SEF project size in the RE energy combining designation is 160 acres. A typical PV module or panel includes several PV cells wired together into a PV array. PV arrays generate direct current (DC) electricity that is converted to alternating current (AC) electricity using an inverter.

PV projects can be mounted on existing structures such as rooftops or parking structures or can be ground mounted (i.e., freestanding). Ground-mounted solar PV projects can use a fixed-tilt or tracking structure. Ground-mounted PV structures are assumed to require 7–10 acres per megawatt of energy produced and range between 4 feet and 30 feet in height, depending on the type of panel and the ground mount.

To maximize electricity generation, solar PV modules are designed to absorb light rather than reflect it. However, panel glass remains relatively smooth and homogenous and is capable of producing a concentrated reflection. Glare is most problematic at glancing angles when the sun is low on the horizon.

In addition to solar panels, solar photovoltaic projects typically include DC to AC inverters and transformers, additional electrical equipment, an interconnection or generation tie (gen-tie) line, telecommunications equipment, potentially a meteorological data collection system, switchgear buildings or structures, and security fencing. Inverters, transformers, and other electrical equipment are generally housed in enclosures that can be up to 20 feet wide by 45 feet long for a Tier 3 SEF project but would likely be smaller for a Tier 1 SEF or Tier 2 SEF project.

The DC output of multiple PV modules is generally collected through an underground trench system to the inverters and transformers. Depending on the size of the line either underground or above ground connection is then made to the distribution system. The generator tie (gen-tie) lines for Tier 1 SEF, Tier 2 SEF, and Tier 3 SEF would likely be 12 kilovolts (kV) and would be strung on either existing or new 35-foot-tall wood poles.

Construction Characteristics of SEFs

Construction of a rooftop SEF would occur entirely on top of a pre-existing structure and would occur within a built environment. Construction activities would include drilling, hammering, installation, and other activities, but they would be confined to the built environment footprint or a nearby laydown area. Rooftop construction would likely take one to two weeks, although the time and size of the workforce is directly related to the size of the roof and system. Additional time would be needed for pre- and post-permitting activities and inspections.

For larger ground-mounted SEFs, up to 160 acres in size, new access roads may be needed. On-site access roads would likely consist of compacted gravel. Vegetation clearance and site grading could occur throughout the entire project site, although some technologies require minimal grading. Topsoil would be stored and used for replanting of areas no longer required for operation. If grading is needed, the most likely heavy equipment used in the site preparation phase would include bulldozers, graders, excavators, scrapers, front-end loaders, and trucks, although other equipment may be needed depending on site conditions.

Some ground-mounted SEFs will include permanent security/protection fencing surrounding the perimeter of the site. During construction, temporary drainage and erosion control measures would likely be used on the site, including diversion channels, retention/detention basins, and silt fences. Permanent drainage modifications may also be necessary to divert or control runoff.

Activities including water spraying and use of chemical suppressants are typically used to reduce fugitive dust during construction. These activities would be undertaken on an as-needed basis following standard industry best management practices.

Construction for Tier 1 SEF, Tier 2 SEF, and Tier 3 SEF projects is likely to take less than one year and for smaller projects, closer to six months. For a Tier 3 SEF project, the EIR assumes up to 40 construction personnel. Tier 1 and 2 SEF projects would average fewer personnel depending on the construction schedule and phasing.

Operational Characteristics of SEFs

Operations and maintenance of generation facilities and associated structures (i.e., gen-tie lines, switchyards, access roads, etc.) would occur on an as-needed basis. For Tier 1 SEF, Tier 2 SEF, and Tier 3 SEF projects, it is likely that up to 3 personnel would be required to periodically service and maintain each facility (no full-time on-site personnel expected). For Tier 1 and 2 projects, no permanent office or restroom facilities are anticipated on site. Should extensive maintenance be required licensed portable sanitation would be provided. Tier 3 facilities may be large enough to require on-site management that would include restrooms.

Solar PV systems do not require water during operations other than for panel washing, estimated at 5 gallons per megawatt-hour (MWh). Panel washing requirements and frequency would depend on technologies and site conditions, but could occur up to four times a year. A typical 20 MW facility would be expected to use less than 1 acre-foot of water per year (approximately 215,000 gallons per year) during operations.

Vegetation management would likely be required to reduce risk of fire and to eliminate any shade on the panels. Maintenance and repair of the panels would occur on an as-needed basis, including disposal of any broken or damaged PV panels.

Any lighting installed for security and nighttime use of facilities would be motion sensor activated and designed to prevent spillover onto adjacent properties. .

Decommissioning of SEFs

Decommissioning of facilities would involve removal of all facilities associated with the project. Dismantled components would be recycled or disposed of, subject to approval of a recycling and disposal plan, to ensure that the process doesn't pose a risk to human health or the environment. Reclamation of all disturbed areas would commence immediately upon completion of the dismantlement of the system to return the location to pre-project conditions.

Wind Energy Conversion Systems (WECS)

Tier 1 WECS projects can only be mounted on a building and are limited to the maximum building height in the land use category plus 5 to 10 feet.

Tier 2 WECS projects, with a minor use permit, could be up to 100 feet in height. Wind projects generally include a rotor, generator, or alternator mounted on a frame; a tail; and a tower.

Through the spinning blades, the rotor captures the kinetic energy of the wind and converts it into rotary motion to drive the generator, which produces AC energy. Tier 2 WECS are limited to 2 MW total generation on site.

There are two types of wind towers that could be used in a Tier 2 WECS project:

- Self-supporting tower: The base of a self-supporting structure is a single, large, square concrete pad approximately 15 feet by 15 feet with three anchor groups. Typically, anchor rods would be at least 4 feet deep.

- Freestanding and guyed tower: The base pad for most guyed towers up to 100 feet tall would be approximately 4.5 feet by 4.5 feet and would typically be built 6 feet deep for guyed towers. Guyed towers consist of lattice sections, pipe, or tubing, supporting guy wires, and the foundation. Because the guy radius must be one half to three quarters of the tower height, guyed towers increase the overall size of the project, as the guys would extend out between 50 to 60 feet from the base.

Because Tier 2 WECS would be no taller than 100 feet, they would not be required to use flashing lights for nighttime safety under Federal Aviation Administration (FAA) regulations unless they were within certain distances from airports or heliports as described in the FAA Title 14 Section 77.9. If the WECS were within the FAA-proscribed distances, an obstruction evaluation would need to be filed, with recommendation provided by the FAA followed regarding lighting. Turbines over 100 feet do not qualify for the program and would require a conditional use permit.

Construction Characteristics of WECS

Tower construction generally consists of digging the hole where the tower would be placed. If the tower is being set in concrete, a substantial foundation hole, up to 6 feet deep, may be required, which would likely require use of a backhoe or excavator. Other tower types may require use of a forklift, tractor, or crane due to the weight and height of the tower components. Construction of the tower would likely require between 3 and 5 people. It can take between 14 to 28 days for the concrete for the pads to cure, but the actual construction days would be fewer.

Operational Characteristics

Wind turbines require annual maintenance. Bolts and electrical connections are checked and tightened. The machines are checked for corrosion and the guy wires for proper tension. In addition, the blades are checked for any worn leading-edge tape. After 10 years, the blades or bearings may need to be replaced, but with proper installation and maintenance, the turbine can last 20 years or longer. Wind turbines do not require water for maintenance.

Decommissioning of WECS

WECS would generally have a life span of 20 to 25 years. Decommissioning work will depend on the site conditions but would likely involve removing all visible traces of the wind turbine. This requires taking down and disposing of the wind turbine, and likely recycling the scrap metals and other useful parts. Concrete bases may be removed or may be left in place underground. There will likely be some ground disturbance during the decommissioning work, and use of a crane or tractor may be required.

2.7 PROGRAM ALTERNATIVES

The California Environmental Quality Act (CEQA) requires an analysis of a reasonable range of alternatives to the proposed Program that are feasible and would achieve the main objectives of the Program as proposed, while reducing at least some of the environmental impacts associated with it. The alternatives described below are analyzed in Chapter 4.0 of this EIR.

Alternative 1: Limited Combining Designation Scope

Alternative 1 consists of an RE Combining Designation that is more limited in scope than that of the proposed RESP by limiting projects to rooftop and structure-mounted projects, and ground mounted projects of 40 acres or less. This alternative would also limit streamlining (i.e. ministerial approvals) to only those projects that could be fully screened from public view adjacent to a project site, and would require that Tier 1 ground-mounted SEFs not be located on Important Agricultural Soils. The intent of this alternative is to reduce the project's Class I impacts for aesthetics, agricultural resources, and land use and planning, and reduce overall impacts to other resource areas by substantially reducing the maximum allowed project footprint. .

Alternative 2: Smaller Combining Designation Footprint

Alternative 2 consists of a RE Combining Designation that excludes all land with Important Agricultural Soils. This would reduce the total acreage of the RE Combining Designation from 801,910 acres to approximately 483,570 acres, a reduction of approximately 40 percent. The sole intent of this alternative is to reduce the potential for Class I impacts associated with the conversion of agricultural land to nonagricultural uses, identified in the Sections 3.2 and 3.9. All other aspects of the Program as proposed would remain unchanged.

Alternative 3: No Project

Alternative 3 is the CEQA-mandated No Project Alternative. Under Alternative 3, existing policies governing renewable energy development in the county would remain in place. Environmental impacts may be reduced in some instances because all projects would be evaluated individually and with potentially greater scrutiny. However, Alternative 3 could also result in more cumbersome permitting processes with less certain outcomes, thus resulting in less renewable energy development than would occur under the proposed Program.

2.8 INTENDED USES OF THE EIR

This EIR is intended to evaluate the environmental impacts of adoption and implementation of the Program. This EIR should be used as the primary environmental document to evaluate all subsequent actions associated with renewable energy projects in the county. The types of specific projects that are associated with the project are identified in subsection 2.6 above. These projects will be evaluated at the time they are proposed to determine whether they are eligible for streamlined approvals or if subsequent environmental review under CEQA is required.

2.9 PROGRAM APPROVALS AND SUBSEQUENT ACTIONS

A set of actions must be taken by the County, including certification of the EIR, adoption of the Program, adoption of General Plan amendments, policy and procedure changes, and other miscellaneous implementation actions. Each of these is described in more detail below.

CERTIFICATION OF THE ENVIRONMENTAL IMPACT REPORT

Before taking action on the Program, the Board of Supervisors (Board) must certify that the EIR was completed in compliance with CEQA. The Board will review and consider the information in the EIR before taking action on the project and determining if the EIR reflects the County's independent judgment and analysis.

PROGRAM ADOPTION

The Board of Supervisors will consider adoption of the Program following certification of the EIR. This adoption may include incorporation of any identified mitigation measures from the EIR as policies and/or actions into the new Program. Before adoption, the County is required to make specific findings of fact pursuant to State CEQA Guidelines Sections 15090, 15091, and 15093 regarding the significant environmental impacts of the project, the feasibility of measures to mitigate those impacts, and, if appropriate, a statement of overriding considerations. The Board's action on the Program will be based on consideration of recommendations of the San Luis Obispo County Planning Commission.

To enact the Program, the County would adopt amendments to the following documents:

- Conservation and Open Space Element of the General Plan (Chapter 5 and Glossary)
- Land Use and Circulation Element Part I – Framework for Planning (Inland) (Chapter 7)
- Land Use and Circulation Element Part II – Area Plans
- Land Use and Circulation Element Part III – The Official Maps
- Title 22, Land Use Ordinance (Articles 2, 3, 4, and 8)
- Land Use Permit Application Package
- Williamson Act Rules of Procedure

Appendix 2.0 provides all proposed changes, including General Plan amendments, map amendments, land use ordinance revisions, Williamson Act Rules of Procedure, and the proposed changes to the Land Use Permit Application Package.

REFERENCES

CEC (California Energy Commission, Electricity Supply Analysis Division). 2013. *California Energy Demand 2014–2024 Final Forecast Volume 2: Electricity Use by Utility Planning Area.* CEC-200-2013-004-V2-CMF.

3.0 Environmental Impact Analysis

The following is an introduction to the environmental analysis of the Program contained in Sections 3.1 through 3.12, providing the reader an overview of the structure, approach, and impact definitions. The reader is referred to the individual technical sections of the EIR (Sections 3.1 to 3.12) regarding the specific assumptions and methodologies used in the analysis for that particular technical subject.

3.0.1 BASELINE ENVIRONMENTAL CONDITIONS ASSUMED IN THE EIR

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 in San Luis Obispo County are described in Chapter 2.0, Project Description, of this EIR. The individual analysis sections of the EIR (see Sections 3.1 through 3.12) further detail the physical setting and regulatory environment with respect to each topic as they existed when the NOP was released on April 23, 2014.

3.0.2 STRUCTURE OF THE ENVIRONMENTAL IMPACT ANALYSIS

The individual technical sections of the EIR follow the following format.

PHYSICAL 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. As previously identified above, the environmental setting is based on conditions as they existed when the NOP for the project was released on April 23, 2014.

REGULATORY SETTING

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

IMPACTS AND MITIGATION MEASURES

This subsection identifies direct and indirect environmental effects associated with implementation of the RESP. Standards of significance are identified and used to determine whether the environmental effects are considered “significant” and require the application of mitigation measures. Each environmental impact analysis is identified numerically. Where applicable, impact analyses are further categorized into the four inland planning areas (Carrizo, North County, San Luis Obispo, and South County) in the county (the RESP does not apply to the County’s Coastal Zone).

Due to the programmatic nature of the EIR (no specific projects are evaluated), it is not possible to craft site-specific and project-specific mitigation measures. Instead, this EIR identifies standards in the Program that would avoid or minimize significant environmental effects.

CUMULATIVE IMPACTS

State CEQA Guidelines Section 15130 requires that EIRs include an analysis of the cumulative impacts of a project when the project's effect is considered cumulatively considerable. Each technical section in the EIR considers whether the project's effect on anticipated cumulative setting conditions is cumulatively considerable (i.e., a significant effect). "Cumulatively considerable" means that the incremental effects of an individual project are significant when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probable future projects (Section 15065(a)(3)).

3.0.3 IMPACT DETERMINATIONS USED IN THE EIR

This EIR uses the following terminology to describe the environmental effects of the proposed project:

- **Class I. Significant, Unavoidable and Adverse:** An impact that cannot be reduced to below the threshold level given reasonably available and feasible mitigation measures. Such an impact requires a Statement of Overriding Considerations to be issued if the project is approved per Section 15093 of the State CEQA Guidelines.

- **Class II. Significant but Mitigable:** An impact that can be reduced to below the threshold level given reasonably available and feasible mitigation measures. Such an impact requires findings to be made under Section 15091 of the State CEQA Guidelines.

- **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.

- **Class IV. Beneficial**: An effect that would reduce existing environmental problems or hazards.

- **Insignificant Impact**: The resource area bears little relation to the actions proposed and impacts would be negligible.

- **Less Than Cumulatively Considerable Impact:** A less than cumulatively considerable impact would cause no substantial change in the physical condition of the environment under cumulative conditions.

- **Cumulatively Considerable Impact:** A cumulatively considerable impact would result when the incremental effects of an individual project result in a significant adverse physical impact on the environment under cumulative conditions.

3.1 Aesthetics and Visual Resources

This section describes the existing aesthetic and visual resources within San Luis Obispo County, identifies regulations in place to protect important visual resources, and discusses the impacts to aesthetics and visual resources associated with implementation of the Renewable Energy Streamlining Program (RESP or Program). The analysis focuses on any anticipated alteration of the landscape characteristics and potential visual resource impacts.

3.1.1 PHYSICAL SETTING

Scenic resources include landscape patterns and features that are visually or aesthetically pleasing and that contribute affirmatively to the definition of a distinct community or region including, but not limited to, trees, rock outcroppings, and historic buildings. Scenic areas, open spaces, rural landscapes, vistas, country roads, and other factors interact to produce a net visual benefit for individuals or communities in the county. The consideration of scenic resources and aesthetics utilizes resource-specific quantitative and qualitative terminology. The following factors are important to the analysis of visual resources:

- **Key Observation Point (KOP):** Areas or a series of points on a travel route or at a public use area where the view of a proposed activity would be most revealing.
- **Viewshed:** The landscape that can be directly seen under favorable atmospheric conditions from a particular point/area visible from an observer's standpoint.
  - Foreground view: 0–1 mile
  - Middleground view: 1–3 miles
  - Background view: 3–5 miles
- **Visual Contrast:** Opposition or unlikeness of different forms, lines, colors, or textures in a landscape. Generally, increased visual contrast in foreground distances would be more noticeable to viewers than increased visual contrast in background distances.
- **Visual Quality:** The relative worth of a landscape from a visual perception point of view.
- **Viewer Groups:** The perception of viewers is influenced by their location, specific activities in which they are engaged, personal degree of awareness, and individual values and goals. Activities associated with the project could affect three distinct viewer groups: motorists, residents, and recreationists.
  - *Motorists* – Motorists are people who view the primary study area from a moving vehicle. Motorists can be drivers or passengers. This group typically consists of commuters, local residents, business travelers, and tourists. Tourists are often acutely aware of viewsheds. Business travelers, commuters, and local residents who travel the same routes frequently may become inured to a view but at the same time are more likely to be aware of visual changes than occasional passersby.
  - *Residents* – Residents are people whose homes, businesses, and/or property are near and have a view of visual resources and viewsheds. The sensitivity of residents to aesthetic values and changes to a viewshed is highly individual. In addition, the sensitivity of residents to changes in a viewshed is influenced, in part, by the location and the length of time that the view from a particular location appears altered from its previous condition (e.g., temporary changes during construction or long-term modifications to the landscape).

- *Recreationists* – Recreationists are people who participate in land-based activities, such as hiking along the shoreline, camping in campgrounds, or water-based activities, such as boating, fishing, or rafting.

VISUALLY SENSITIVE AREAS

The county has specific scenic resources identified in multiple planning documents described below.

- Designated Scenic Vista: A viewpoint that provides expansive views of a highly valued landscape for the benefit of the general public. The County Designated Scenic Vistas are all located in the Coastal Zone. As the RESP does not apply to lands in the Coastal Zone, these designated scenic vistas are not discussed further in this EIR.

- County-Designated Scenic Highway: Scenic highways are designated in the General Plan Conservation and Open Space Element (COSE) and are corridor viewsheds from popular public roads and highways that have unique or outstanding scenic qualities. These scenic corridors are designated to conserve and enhance their scenic beauty.

- County Sensitive Resource Area: As defined in the General Plan, both in the COSE and Land Use and Circulation Elements, Sensitive Resource Areas (SRA) are applied to areas having high environmental quality and special ecological or educational significance. Within the county, SRAs are combining designations or zoning overlays used to protect certain scenic areas (SLO County 2010b). These elements are discussed in further detail in subsection 3.1.2, Regulatory Setting.

- California Scenic Highway: California's Scenic Highway Program serves to protect and enhance the natural scenic beauty of state highways and adjacent corridors through special conservation treatment. Scenic corridors consist of land that is visible from the highway right-of-way and comprise primarily scenic and natural features. Applicable ordinances, zoning, and planning policies are then activated to preserve the scenic quality of the corridor. These ordinances and policies make up the Corridor Protection Program. The only California Scenic Highway in the county is located in the Coastal Zone. As the RESP does not apply to lands in the Coastal Zone, these designated scenic vistas are not discussed further in this EIR.

- County General Plan Suggested Scenic Corridors/Eligible State Scenic Highways: These corridors have been proposed or are eligible for designation but have not yet been officially designated by either the County or the California Department of Transportation (Caltrans), separately. The corridors warrant additional study before determining which specific areas along the corridors merit protection and are officially designated as scenic corridors. Due to their proposed and eligible status, some level of visual quality along these corridors is expected.

- Highway Corridor Design Standards: As Area Plans have been updated, these standards were included to reduce visible impacts associated with certain development along the most prominent transportation corridors containing high scenic qualities.

CARRIZO PLANNING AREA

The Carrizo Planning Area is located in southeastern San Luis Obispo County and is dominated by the Carrizo Plain. The northwest–southeast-trending plain is approximately 15 miles wide and 50 miles long, surrounded by foothills and mountains. To the east are the Temblor Range (3,000 to 4,500 feet elevation) and the San Andreas fault. To the west are the La Panza and Caliente ranges (3,000 to 5,000 feet elevation). These mountains separate the plain from the San Joaquin Valley to the east and the Pacific Coast to the west.

The Carrizo Plain consists of grassland, rangeland, desert, and rugged chaparral-covered terrain. Irrigated vineyards and alfalfa fields are found in the north end of the plain. Parcels are generally large ownership acreages. Much of southern half of the plain is federal land managed by the US Bureau of Land Management (BLM), Bakersfield Field Office. The federal land includes the 250,000-acre Carrizo Plain National Monument. This area is noted for its geologic features, which include the San Andreas fault and Soda Lake; archeological sites; and wildlife and other natural resources. The National Monument includes the largest remaining remnant of original San Joaquin Valley habitat.

A two-lane highway, State Route (SR) 58, is the major east–west transportation route across the Carrizo Plain, providing local access and connecting coastal San Luis Obispo County and Kern County. Local county roads connect to SR 58 providing north–south linkages.

The Carrizo Planning Area viewshed is dominated by rolling hills and rural landscape. Following the winter wet season, plant life reemerges, and from March through May, the Carrizo Plain can provide an impressive display of wildflowers, including lupines, poppies, goldfields, thistle sage, primroses, and scores of other flowering plants. This annual spring event varies in duration and intensity, depending on weather, and can attract visitors who come to enjoy this natural display.

Two large utility-grade solar power plants have recently been completed, or are nearing completion, and dominate State Route 58 views over the eastern half of the plain. These two photovoltaic projects cover approximately 5,000 acres and generate 800 megawatts (MWs). Although the dominant visual characteristic of the Carrizo Plain landscape is that of long, unobstructed views across the plain to a mountainous backdrop, prominent features along the eastern half of the plain along SR 58 are two large utility-scale solar power plants. The results along this portion of the highway are that the natural landscape rich in textural diversity is broken up by the smooth lines of the solar plants that lack texture and are uniform and disrupt the natural landform continuity. The western portion of the plain's level topography extends for miles and lacks any substantial vertical elements (e.g., trees or buildings) to obstruct views creating the viewscape.

Unlike the San Joaquin and Sacramento valleys, where views extend across long distances, the mountains surrounding the Carrizo Plain provide a sense of enclosure to the view. In the southern part of the plain in particular, the infrequency of structures and lack of extensive cultivation enhances a sense of a landscape that would have been experienced in the historic and prehistoric past. The plain's geography enables a viewer to see and be seen over great distances, as compared to locations where views are limited by topography, tall vegetation, and structures. Experiencing panoramic views in the Carrizo Plain is further enhanced when an observer is atop even a modest rise in topography, whether on the plain itself or at its periphery.

The Carrizo Planning Area includes portions of a Scenic County SRA around the Caliente Range in the Carrizo Plain National Monument, most of which is located in the South County Planning Area. Additionally, this Planning Area is dominated by County-suggested scenic corridors along

State Route 58 and Elkhorn Road. Elkhorn Road runs northwest to southeast near the eastern border of the Carrizo Plain. Portions of Soda Lake Road and Bitterwater Road north of SR 58 are also County-suggested scenic corridors.

NORTH COUNTY PLANNING AREA

The North County Planning Area covers the majority of the county and is a combination of rural area dominated by a natural or agriculture countryside with developed areas along the Highway 101 and SR 41 corridors. Topography varies from relatively flat low-lying floodplain areas to rolling hills to steeply sloping foothills of the Santa Lucia Range. This range forms the planning area's western boundary and is heavily forested. The area along the eastern slopes of the Santa Lucia Range is primarily used as rangeland, and rolling farmlands in the north and east of this area support extensive dry farming, orchards, and vineyard operations. The Temblor Range extends into the eastern portion of the planning area. The Cholame Hills and the Cholame Valley make up the northeastern portion of the area. Other notable topographic features include Machesna Mountain, with an elevation of 4,066 feet, and the Shandon and San Juan valleys (DeCourten 2010).

On both sides of the Salinas River, the terrain varies from gently rolling hills with oak savanna and open grassland (from San Miguel to Atascadero) to steeper hills of dense oak woodland (southern Atascadero and Santa Margarita). Oak woodlands are a prominent unifying feature through the planning area. Although this area along the Salinas River has significant urban development, many areas in the North County Planning Area have been able to retain a rural character, providing a visual contrast to the urban centers located along Highway 101.

The communities of Oak Shores, Heritage Ranch, Garden Farms, Santa Margarita, San Miguel, Whitley Gardens, and Shandon introduce some built environment into the otherwise rural planning area. Additionally, the Highway 101 corridor is dominated by the incorporated cities of Paso Robles and Atascadero, and the unincorporated community of Templeton..

The flatter areas of the Salinas River floodplain in the North County Planning Area are generally in cultivation. Agriculture provides a working landscape with rural development such as houses, barns, and warehouses. Typical architectural styles in the planning area often connect to the historic settlements in the North County. Spanish mission, ranch, and western styles of architecture are prevalent and reflect the region's historic link with farming and ranching.

According to SLO County (2014a), the North County Planning Area has several scenic SRAs, including:

- The Lake Nacimiento Drive Interlake Road SRA. The portion of this route from Chimney Rock Road northwest to the Monterey County line is an adopted county scenic highway. Any new land use development along this corridor must consider impacts to visual resources.

- Pine Mountain SRA. This SRA is designated for a combination of botanical, wildlife, scenic, and historical value. The La Panza Range extending south to Machesna Mountain has seen minimal development, so it retains its natural scenic quality.

- Rocky Butte Botanical Area SRA. This SRA is located along the west side of Lake Nacimiento and serves as a valuable scenic backdrop. Approximately 460 acres of this area is owned by the Bureau of Land Management.

- Santa Lucia Wilderness Area SRA. This area is extremely important for its wildlife value but also has been deemed valuable for its scenic backdrop.

In addition to having multiple scenic SRAs, this planning area has eligible state scenic highways (Highway 101 from the intersection with SR 46, SR 46 from Highway 1 to SR 41, and SR 41 from Highway 1 to Highway 101), a County-designated scenic roadway (Interlake Road), and County-suggested scenic roadway corridors (SR 58 and multiple county roads).

SAN LUIS OBISPO PLANNING AREA

The northern portion of the San Luis Obispo Planning Area is defined topographically by two parallel mountain ranges—the Santa Lucia Range along the northeast boundary and the Irish Hills located toward the central portion of the planning area. The valleys between the two ranges are punctuated by a chain of volcanic morros—Islay Hill southeast of the City of San Luis Obispo and Cerro San Luis, Bishop's Peak, Chumash Peak, and Cerro Romauldo to the northwest. Outside the city, the primary visual resource consists of agricultural and open space lands contrasted with volcanic peaks, all viewed against a backdrop of the more distant mountains bordering the planning area. Patterns of vegetation are also a significant visual element. The linear patterns of vineyards and other agricultural crops accentuate the contrast between foreground views and the distant mountain backdrop with its pattern of wooded areas and grasslands.

The planning area is dominated by the incorporated city of San Luis Obispo. However, views of Cuesta Ridge, San Luis Mountain, Bishop's Peak, the Irish Hills, and the San Miguelito Hills provide a scenic backdrop to the city.

According to SLO County (2014a), the San Luis Obispo Planning Area has the following scenic SRAs:

- Coon Creek Bishop Pines SRA. This SRA is a strand of native bishop pines located on the ridge and hillsides on the south side of Coon Creek and forms a scenic backdrop in Montana de Oro State Park.

- Ontario Ridge SRA. This SRA provides a scenic backdrop for the coastal area of Avila Beach and Pismo Beach and for the Avila Valley.

- Irish and San Miguelito Hills SRA. This SRA covers the area from the southern boundary of the San Luis Obispo North subarea down to the 200-foot elevation and is highly visible from Highway 101, SR 227, Los Osos Valley Road, Foothill Boulevard, and Prefumo Canyon Road.

- Los Morros including Islay Hill, Righetti Hill, Cerro San Luis, Bishop Peak, Chumash Peak, Cerro Romauldo, and associated hills SRA. The SRA covers this area from the tops of these hills, peaks, and connecting ridges down to the 280-foot elevation, except that it terminates at the 320-foot elevation above Cuesta College west of O'Connor Way, the 225-foot elevation around the base of the South Street Hills, and varies from 280 feet to 200 feet along Highway 1 east of Cuesta College to the city limits. These areas correspond to the visually prominent backdrops visible from Highways 1 and 101, SR 227, Los Osos Valley Road, Foothill Boulevard, and Prefumo Canyon Road.

In addition to having multiple scenic SRAs, this planning area has multiple State (Highway 1 from the western entrance into the planning area to Highway 101) and County (the entire length of Highway 101 in the Planning Area) designated scenic highways and Highway Corridor Design Standard areas (some areas along Highway 101 and Highway 1).

SOUTH COUNTY PLANNING AREA

The South County Planning Area is located in southern San Luis Obispo County and is dominated by agriculture, rural lands, and open space. Large agricultural areas between Santa Maria, Nipomo Mesa, and Arroyo Grande reflect a rural character. Because of its rural landscape, Nipomo Mesa has attracted recreational development associated with destination resorts and rural residential living. Recreational opportunities, including golf courses, have been developed between Nipomo and Arroyo Grande. This region has older villages that have matured with additional recreational opportunities and community facilities. A peaceful rural atmosphere still prevails around and between Nipomo and the villages. Rural character is also achieved by development in a rural residential density which is the dominant land use on Nipomo Mesa between the urban and village areas. A combination of this overall low density and development which is sensitive to this issue retains and maintains rural charm. New development fits within a rural ambiance both through standard and clustered subdivision designs. Development in rural villages and site-sensitive treatment in scenic areas further enhances this quality of life.

Agriculture remains the most widespread land uses in the eastern portion of the planning area with a total of 223,157 acres of its total 441,790 acres. Over half (51 percent) of the planning area is used for agricultural resources. Many of the large old ranchos and land grants are owned and operated by descendants of the original families living in the same ranch buildings. The large parcel sizes and ownership patterns, the large number of properties under agriculture preserve contracts, and the good soils and extensive grazing lands all reinforce this as an agricultural area.

In addition to agriculture, rural lands and open space land uses make up the majority of the remaining land in the planning area. Rural lands consist of rugged, chaparral-covered terrain and include areas along State Route 166 that are primarily steep brush-covered hills, as well as the rugged and rolling terrain of the Temettate Ridge and Newson Ridge area north and east of Nipomo. Public lands in the Los Padres National Forest are managed by the US Forest Service and are designated as open space. A portion of the eastern part of the planning area is in the Carrizo Plain National Monument, described under the Carrizo Planning Area.

According to SLO County (2014a), the South County Planning Area has several scenic SRAs, including:

- Fish Creek Geode Mountain SRA. This area supports oak woods, mixed evergreen forests, and prominent geologic outcrops of high scenic value.

- Lopez Lake SRA. This area includes private lands within the viewshed and immediate watershed of the Lopez Lake Recreation Area and the highly visible hillsides along the Lopez Drive corridor near Lopez Dam. The SRA boundary largely follows the ridgelines of the areas visible from the recreation area. Development on the scenic hillsides around the lake could threaten the park's visual scene, water quality, primitive values, and wildlife habitat.

- Caliente National Cooperative Land and Wildlife Management Area SRA. The existing preserve includes 58,000 acres of Bureau of Land Management property. This range is considerably different from most areas in the county. There is very little tree cover (occurring primarily on northern slopes), yet this scenic backdrop is one of the most striking in the county. Caliente Mountain, the highest peak in the county at more than 5,100 feet, is located here and is the prominent peak in this outstanding scenic backdrop.

- Pismo Beach Hillsides SRA. The hills and terrace next to the City of Pismo Beach are a scenic backdrop due to their proximity to the city and their undeveloped character.

In addition to having multiple scenic SRAs, this planning area has multiple eligible state scenic highways (Highway 101 for its entire length and SR 166 from Highway 101 to SR 33) and County-suggested scenic highways (scenic highways north of Nipomo). Additionally, the Temettate Ridge and portions of the ridges north of SR 227 have been designated as Highway Corridor Design Standard areas.

3.1.2 REGULATORY SETTING

This subsection discusses the applicable policies and regulations that are relevant to the visual resource analysis of the proposed Program. The section concludes with **Table 3.1-1**, which presents a summary of key policies and standards for aesthetics.

STATE

Nighttime Sky – Title 24 Outdoor Lighting Standards

The California Legislature passed a bill in 2001 requiring the California Energy Commission (CEC) to adopt energy efficiency standards for outdoor lighting for both the public and private sector. In November 2003, the CEC adopted changes to the Title 24, Parts 1 and 6, Building Energy Efficiency Standards. These standards became effective on October 1, 2005, and included changes to the requirements for outdoor lighting for residential and nonresidential development. The new standards will likely improve the quality of outdoor lighting and help to reduce the impacts of light pollution, light trespass, and glare. The standards regulate lighting characteristics such as maximum power and brightness, shielding, and sensor controls to turn lighting on and off. Different lighting standards are set by classifying areas by lighting zone. The classification is based on population figures of the 2000 Census. Areas can be designated as LZ1 (dark), LZ2 (rural), or LZ3 (urban).

LOCAL

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

The Conservation and Open Space Element (COSE) includes visual resource policies that seek to maintain a sense of place, preserve intact scenic landscapes that are valued by residents and visitors, and achieve a high quality visual environment. Within the COSE, important visual landscapes are designated as Scenic Resource Areas (SRAs) and County-designated scenic highways. The SRAs function as an overlay to protect certain scenic areas. The Highway Corridor Design Standard areas are designated areas where scenic protection policies apply. While SRAs and Highway Corridor Design Standards are created in COSE policies, the Land Use Ordinance

provides standards that complement and implement the aesthetic objectives of the COSE. Land Use Ordinance standards are described in further detail below.

San Luis Obispo County General Plan – Land Use and Circulation Element

The Land Use and Circulation Element (LUCE) provides policies for land use and transportation. The County's Strategic Growth Principles in the LUCE guide all countywide development, including Principle #3 to "foster distinctive, attractive communities with a strong sense of place." Policies and strategies in the LUCE apply countywide and by planning area. Policies and strategies seek to maintain distinct urban boundaries and protect attractive rural landscapes. The LUCE also uses combining designations to identify areas with characteristics that are either of public value or hazardous to the public. The special location, terrain, man-made features, plants, or animals of these areas create a need for more careful project review to protect those characteristics or to protect public health, safety, and welfare. Combining designations are established to achieve the following (this list in not all inclusive and only shows goals pertinent to aesthetics and visual resources):

1. To relate intensity of development to the sensitivity of natural resources or other environmental features to minimize adverse environmental impacts.

2. To preserve the natural beauty and topography of the county by encouraging intensive development only where appropriate with regard to those natural features.

In the county, areas of high environmental quality and special ecological or educational significance are designated SRAs. The purpose of areas identified as SRAs is to:

1. Identify areas of high environmental quality, including but not limited to important geologic features, wetlands and marshlands, undeveloped coastal areas and important watersheds.

2. Enhance and maintain the amenities accruing to the public from the preservation of the scenic and environmental quality of San Luis Obispo County.

3. Provide for review of proposed alterations of the natural environment and terrain in areas of special ecological and educational significance.

4. To identify for the purposes of the Land Use Element certain areas defined as open space lands in the county Conservation and Open Space Element, or areas with unique or endangered resources as identified by local, state, or federal governments.

5. Provide locational and design guidelines for siting development that may occur within Sensitive Resource Areas, and encourage development to occur outside of SRAs whenever possible so as to preserve the scenic and environmental qualities of San Luis Obispo County, while retaining the ability to establish proposed land uses and minimum parcel sizes as allowed by the Land use Ordinance.

The LUO provides detailed criteria for the review of projects proposed in the SRA combining designation to achieve the following:

1. Buildings and structures should be designed and located in harmonious relationships with surrounding development and the natural environment.

2. Buildings, structures and plant materials should be constructed, installed or planted to avoid unnecessary impairment of scenic views.

3. Potentially unsightly features should be located to be inconspicuous from streets, highways, public walkways and surrounding properties; or effectively screened from view.

4. Natural topography, vegetation and scenic features of the site should be retained and incorporated into proposed development.

5. Buildings and non-farm structures on agricultural property should be located to cause the least possible conflict with agricultural production by siting them away from the productive agricultural land, while still protecting to the greatest extent possible the scenic and environmental quality of the sensitive resource area.

Certain visual strategies apply only to subareas or specific sites, as presented in **Table 3.1-1**.

San Luis Obispo County General Plan – Agriculture Element

Policies in the Agriculture Element balance visual resource protection with the ongoing viability of agricultural resources and facilities. Policies state that new development in designated scenic corridors must protect scenic resources and locate structures and development in a way that maintains compatibility with agricultural operations. Structures are also encouraged to blend with traditional agriculture and existing agricultural landscapes.

San Luis Obispo County Land Use Ordinance – Title 22

The Land Use Ordinance (LUO) includes standards that apply to setbacks, heights, signage, fencing and screening of mechanical equipment, undergrounding of on-site utilities, and other common project features.

LUO – Exterior Lighting

Exterior lighting is regulated by Section 22.10.060 of the San Luis Obispo County Code, which establishes standards applicable to all outdoor night-lighting sources installed (except streetlights located within the public rights-of-way and all uses established in the Agricultural land use category). This section establishes regulatory guidance relative to light directed onto parking lots, light intensity to reduce glare, light sources to be shielded, height of light fixtures, and street lighting.

LUO – Sensitive Resource Areas

Sensitive Resource Areas are defined as a part of the County's Official Maps and regulated through an SRA Combining Designation as defined in LUO Section 22.14.100 and described within specific Area Plans. Many SRAs are highly scenic areas that have been identified as containing important visual resources that should be considered when new development is proposed. The combining designation applies to new land use permits and requires certain considerations and special findings be made so that all uses within a SRA conform to minimum site design and development standards to protect visual resources. Nonstructural agricultural uses and one single-family dwelling per lot of record are excluded from these provisions.

LUO – Highway Corridor Design Standards

Highway Corridor Design Standards (Section 22.10.095 of the LUO) are design standards developed to protect important views, natural landmarks, scenic backdrops, and scenic vistas for mapped areas of visual resources along the San Luis Obispo Highway Corridor (as mapped on the County's Official Maps and described in the County's LUO (Section 22.10.095)). In the San Luis Obispo Highway Corridor, these standards apply requirements for all projects within the SRA (as mapped on Figure 10-22 of LUO Section 10.22.095) and all residential structures and residential accessory structures along the highway corridor located outside of the SRAs. These standards were developed during individual Area Plan updates and also apply to the Salinas River Highway Corridor and the South County Highway Corridor; however, they apply only to residential structures and residential accessory structures.

LUO – Planning and Community Area Standards

Subareas and communities in the unincorporated area are addressed by specific ordinance standards that require compatibility with a particular landscape or neighborhood. Within the LUO, Article 9 (Planning Area Standards) and Article 10 (Community Area Standards) provide additional standards that seek to protect existing visual character, preserve scenic vistas, and minimize the impacts of new development by blending new development into the existing environment. Several specific plans also provide additional regulations.

LUO – Development Standards and General Requirements

Section 22.32.030 has specific requirements and development standards to protect not only scenic viewsheds but scenic geologic features, such as rock outcroppings, from visual encroachments associated with development.

- Section 22.32.030.D requires that areas cleared of vegetation and topsoil during construction be restored (regraded, covered with topsoil, and replanted) once those disturbed areas are no longer required for operation.

- Section 22.32.030.F requires that electric distribution lines less than 60 kilovolts (kV) be undergrounded to prevent visual clutter.

- Section 22.32.030.I requires that ground-mounted renewable energy facilities not be placed on exposed bedrock, rock outcrops, or significant ridgetops.

Countywide Design Guidelines

The Countywide Design Guidelines (1998) apply throughout the county to protect visual and historical character. General guidance applies to both urban and rural areas. Guidance encourages accessory structures to reflect the character of main buildings. Fences and screening for projects should reflect the area's rural character. In addition, guidance directs that infrastructure in rural areas should be painted or located to reduce visibility.

Community Design Plans

New development in the following areas is guided by individual design plans, which have been adopted by the Board of Supervisors: communities of Cambria, San Miguel, Santa Margarita, and Templeton, Olde Towne Nipomo, and in the West Tefft Corridor. These plans provide

additional goals, policies, standards, and/or guidelines for the appearance and design of new development.

Summary of Local Regulations and Policies

Table 3.1-1 summarizes regulations and policies from the documents described above, including General Plan elements, the LUO, and the Countywide Design Guidelines. Information is organized by planning area. The table also identifies where policies or standards only apply to subareas or land use designations.

TABLE 3.1-1
LOCAL POLICIES AND REGULATIONS FOR AESTHETIC ISSUES

Code or Policy Section	Summary
Countywide	
Title 22, Section 22.10.090	Establishes height limits in part to support the preservation of neighborhood character and to preserve viewsheds and scenic vistas.
Title 22, Section 22.10.080	Provides fencing and screening requirements to protect certain uses from intrusion, to protect the public from uses that may be hazardous, and to increase compatibility between different land uses by visual screening.
Title 22, Section 22.10.160	Includes requirements for utilities serving new structures and when undergrounding of these utilities is appropriate rather than the use of poles and overhead lines
Title 22, Section 22.10.060	Includes requirements for onsite lighting, including the height of fixtures and the prevention of glare and light spillage onto adjacent properties.
Title 22, Section 22.32.060	Solar photovoltaic projects must not create any concentrated reflections directed at occupied structures, recreation areas, or roads.
Title 22, Section 22.32.050	Wind energy conversion systems facilities require additional setbacks from property lines and structures.
Conservation and Open Space Element, Policy VR 2.2	Encourage designs that emphasize native vegetation and conform grading to existing natural forms. Encourage abundant native and/or drought-tolerant landscaping that screens buildings and parking lots and blends development with the natural landscape.
Agricultural Element, AGP30, Scenic Resources: b.1	New development requiring a discretionary permit in designated scenic corridors: Balance the protection of the scenic resources with the protection of agricultural resources and facilities.
Agricultural Element, AGP30, Scenic Resources: b.2	New development requiring a discretionary permit in designated scenic corridors: When selecting locations for structures, access roads, or grading, the preferred locations will minimize visibility from the scenic corridor and be compatible with agricultural operations.
Agricultural Element, AGP30, Scenic Resources: b.3	New development requiring a discretionary permit in designated scenic corridors: Use natural landforms and vegetation to screen development whenever possible.
Agricultural Element, AGP30, Scenic Resources: b.4	New development requiring a discretionary permit in designated scenic corridors: In prominent locations, encourage structures that blend with the natural landscape or are traditional for agriculture.
Conservation and Open Space Element, Goal VR 1	Rural areas: The natural and agricultural landscape will continue to be the dominant view in rural parts of the county.
Countywide Design Guidelines,	Rural areas: Accessory structures should reflect the character of the main house.

Code or Policy Section	Summary
Objective RU-4, Guideline a	
Countywide Design Guidelines, Objective RU-5	Rural areas: Fences and screening should reflect an area's rural quality.
Countywide Design Guidelines, Objective RU-6, Guideline b	Rural areas: Where possible, infrastructure should be painted to blend with its surroundings.
Countywide Design Guidelines, Objective RU-6,, Guideline c	Rural areas: Where infrastructure would be visible and cannot otherwise be concealed, undergrounding of utilities is encouraged.
Countywide Design Guidelines, RU-5, Guideline a	Rural areas: When provided, fencing located along public roadways should consider the use of low split rails or peeler posts, architectural wire and fences with vines or shrubs.
Countywide Design Guidelines, RU-6, Guideline a	Rural areas: Infrastructure [greater than 2 feet in diameter] should be sited in trees or behind structure or newly installed landscaping so that it is not visible from public roads or other residences in the area.
Conservation and Open Space Element, Policy VR 1.1	Sensitive Resources Areas (SRAs): Protect scenic views and landscapes, especially visual SRAs from incompatible development and land uses.
Conservation and Open Space Element, Goal VR 4	SRAs: Protect visual resources within visual SRAs for scenic corridors.
Carrizo Planning Area	
No additional policies or standards for the Carrizo Planning Area.	
North County Planning Area	
Title 22, Article 9 (22.94.070.H)	Nacimiento subarea: Any new development shall not be visible from Highway 1, unless the development provides visitor-serving uses or unless no alternative locations exist.
Title 22, Section 22.10.095, B.3.a	Salinas River Highway Corridor Area, projects requiring discretionary permits: Locate development, including access roads, in the least visible portion of the site, and use existing vegetation and site features to screen the project, as viewed from the applicable highway corridor or road.
Title 22, Section 22.10.095, B.3.c	Salinas River Highway Corridor Area, projects requiring discretionary permits: Minimize building appearance and mass using low-profile design and colors that harmonize with the surrounding natural environment.
Title 22, Section 22.10.095, B.3.d	Salinas River Highway Corridor Area, projects requiring discretionary permits: Provide landscaping to screen and buffer development through extensive use of trees and large-growing shrubs in compliance with Chapter 22.16.
Title 22, Section 22.10.095, B.2.h	Salinas River Highway Corridor Area, projects requiring zoning clearance: A landscaping plan is required in compliance with Chapter 22.16 and shall ensure at least 50% screening of the structure at plant maturity.
Title 22, Section 22.10.095, B.2.d	Salinas River Highway Corridor Area, ridge-top development, projects requiring zoning clearance: Structures within the corridor boundaries shall be located so they are not silhouetted against the sky.
Title 22, Section 22.10.095, B.2.g	Salinas River Highway Corridor Area, projects requiring zoning clearance: building height and color: Maximum building height is 25 feet above natural grade. This height limit may be increased an additional 5 feet for agricultural accessory buildings subject to a visual study that supports a finding that buildings will have appropriate forms to minimize their visual impact on surrounding properties and Highway 101. Building color other than trim shall be similar to surrounding natural colors and no brighter than 6 in chroma and value on the Munsell Color Scale.

Code or Policy Section	Summary
Title 22, Article 9 (22.94.082.A-B)	Salinas River subarea, Santa Margarita Ranch, AG: Agriculture, RL: Rural Lands: The visual impact of any new development shall be minimized.
Land Use Ordinance, Section III, Shandon Community Plan Appendix D (EIR Mitigation Measures, AES-3(b)s)	Shandon Community: Finish materials, including glazing, shall be of a low reflectivity to minimize glare.
San Luis Obispo Planning Area	
Title 22, Section 22.10.095, C.4.a	San Luis Obispo Highway Corridor Area, projects requiring discretionary review: Locate all development including accessory structures (including water tanks) and access roads in the least visible portion of the site as viewed from any of the scenic highway or railroad. Exemptions are provided for agricultural accessory structures (Section 22.10.095, C.2.b-d).
Title 22, Section 22.10.095, C.4.d	San Luis Obispo Highway Corridor Area, projects requiring discretionary review: Minimize building height and mass by using low-profile design where applicable. Minimize building visibility (including water tanks) by using colors to harmonize with the surrounding natural environment.
Title 22, Section 22.10.095, C.4.e	San Luis Obispo Highway Corridor Area, projects requiring discretionary review: Provide landscaping to screen and buffer development with native or drought-resistant plants, including extensive use of trees.
Title 22, Section 22.10.095, C.3.b	San Luis Obispo Highway Corridor Area, projects requiring zoning clearance: Where possible, residential buildings, residential accessory structures, and agricultural accessory structures shall be set back 100 feet from the applicable scenic highway or railroad right-of-way. If there is no feasible development area outside this setback, the project shall be located on the rear half of the property and provide a landscaping screen. A landscaping plan in compliance with Chapter 22.16 (Landscaping Standards) shall be provided at the time of building permit application submittal.
Title 22, Section 22.10.095, C.3.d	San Luis Obispo Highway Corridor Area, projects requiring zoning clearance: Structures within the SRA shall not be located so as to be silhouetted against the sky as viewed from any of the scenic highway or railroad corridors designated in Chapter 6 of the San Luis Obispo Area Plan.
Title 22, Section 22.10.095, C.3.h	San Luis Obispo Highway Corridor Area, projects requiring zoning clearance: A landscaping plan is required adjacent to the applicable structure to obtain at least 50 percent view screening of the structure.
Title 22, Section 22.96.050F	San Luis Obispo Hillside Sensitive Resource Area: Subject to Highway Corridor Design Standards.
South County Planning Area	
Title 22, Article 9 (22.98.020.E.5)	Pismo Beach Hillsides Sensitive Resource Area: proposed projects above the 200-foot elevation contour shall be located to screen 90% of the site from view within the City of Pismo Beach and from Highway 101.
Title 22, Article 9 (22.98.050.C)	San Luis Bay South subarea: Projects requiring a conditional use permit on sites with varied terrain shall concentrate development on moderate slopes. Steep slopes visible from roads should be retained as undeveloped.
Title 22, Section 22.10.095, D.5.a	South County Highway Corridor Area, projects requiring discretionary review: Locate development, including access roads, in the least visible portion of the site consistent with the protection of other resources, as viewed from Highway 101. Use existing vegetation and topographic features to screen development from view as much as possible.

Code or Policy Section	Summary
Title 22, Section 22.10.095, D.5.b	South County Highway Corridor Area, projects requiring discretionary review: Minimize grading for both structures and roads that would create cut and fill slopes visible from Highway 101.
Title 22, Section 22.10.095, D.5.c	South County Highway Corridor Area, projects requiring discretionary review: Minimize building appearance and visual impact using low-profile design and colors that blend with surrounding natural colors and/or screen the building from view.
Title 22, Section 22.10.095, D.5.d	South County Highway Corridor Area, projects requiring discretionary review: Provide landscaping to screen and buffer both road and building development with native or drought-resistant plants, including the extensive use of trees and large-growing shrubs.
Title 22, Section 22.10.095, D.4.c	South County Highway Corridor Area, projects requiring discretionary review, agricultural accessory buildings larger than 600 feet, or buildings meeting other specified criteria: Residential buildings, residential accessory structures, and agricultural structures shall be set back 100 feet from Highway 101. If there is no feasible development area outside this setback, the project shall be located on the rear half of the property and shall provide a landscaping screen to provide 80% coverage.
Title 22, Section 22.10.095, D.4.d	South County Highway Corridor Area, projects requiring discretionary review, agricultural accessory buildings larger than 600 feet, or buildings meeting other specified criteria: Structures shall be located so they are not silhouetted against the sky as viewed by Highway 101.
Title 22, Section 22.10.095, D.4.f	South County Highway Corridor Area, projects requiring discretionary review, agricultural accessory buildings larger than 600 feet, or buildings meeting other specified criteria: Maximum building height is 25 feet above natural grade, with exceptions for agricultural accessory buildings of an additional 5 feet subject to a visual study that supports a finding that buildings will have appropriate forms to minimize their visual impact on surrounding properties and Highway 101. Where possible, agricultural accessory buildings within 300 feet of Highway 101 shall have service entrances oriented away from view of Highway 101. Building color shall be similar to surrounding natural colors that are no brighter than 6 in chroma and value on the Munsell color scale.
Title 22, Section 22.10.095, D.4.g	South County Highway Corridor Area, projects requiring discretionary review, agricultural accessory buildings larger than 600 feet, or buildings meeting other specified criteria: Landscaping plan is required that will ensure at least 50% screening of the structure at plant maturity. Landscaping shall include mitigation planting or seeding for graded cut and fill areas in compliance with Chapter 22.16.
Land Use Element, Part II, Section V, 1.6 (Supportive Goals, Environment, 1)	South County subarea: Encourage the blending of structures into the surrounding environment and the minimization of visual impacts in areas considered to be scenic.
Title 22, Article 9 (22.98.072.H.11)	South County subarea, Green Canyon property, RR Residential Rural land use designation: Projects must protect biological resources, maintain rural character, and screen 80% of new development from Highway 1 and Oso Flaco Road.
Title 22, Article 9 (22.98.072.D.3)	South County subarea, North of Santa Maria River area, IND Industrial land use designation: Additional standards apply to select parcels. Projects must minimize visibility from Highway 101, coordinate with the Air Pollution Control District, and protect biological resources within 150 feet of Nipomo Creek and the Santa Maria River.

3.1.3 IMPACTS AND MITIGATION MEASURES

THRESHOLDS OF SIGNIFICANCE

Pursuant to the State CEQA Guidelines and the County's Environmental Checklist, the project would result in a potentially significant impact if it would:

1) Have a substantial adverse effect on a scenic view.

2) Damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a designated scenic area.

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

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

5) Significantly impact unique geological or physical features.

PROJECT IMPACTS AND MITIGATION MEASURES

Have a Substantial Adverse Effect on a Scenic View (Threshold 1)

Impact 3-1-1 – Construction Implementation of the proposed Program could result in a substantial adverse effect on a scenic view during construction. This impact is considered **less than significant (Class III)**.

Tier 1 roof and structure-mounted solar electric facilities (SEF) and wind energy conversion system (WECS) projects would result in only minor visual disturbance during construction because they will occur on existing structures. During construction of ground-mounted SEF projects (Tier 1, 2, or 3), the presence of construction equipment would introduce temporary visual contrast for foreground and near-middleground views. Ground clearing and numerous vehicles/equipment are required to deliver and install the arrays, resulting in movement, dust, and the presence of construction equipment.

Additionally, access roads may need to be created or widened to accommodate construction equipment needed for project development and could result in visual disturbance, particularly if the roads are located on a visible slope in a SRA. Site clearing also creates opportunities for visible windblown dust clouds to occur. Often, temporary structures are located within the work site for component assembly and finishing and for project site offices. However, visual impacts from the presence of construction equipment and vehicles are short term. Because visual impacts during construction would be temporary, impacts are considered **less than significant (Class III)**.

Impact 3-1-1 – Solar Implementation of the proposed Program could result in the development of solar energy projects that have a substantial adverse effect on a scenic view. This impact is **significant, unavoidable, and adverse (Class I)**.

Because roof or structure-mounted Tier 1 SEFs would be attached to existing structures, visual contrast with the existing aesthetic environment would likely be nominal. Furthermore, proposed County Code Section 22.32.050.D.2 ensures roof- and structure-mounted solar electrical facilities are integrated with roofing materials or blended with a structure's architectural form. As such, it is assumed that inverter and any other on-site electrical switchgear would be minimal in size and blend with the existing structures or developed area. Adherence to Title 22.32.050.D.2 would minimize visual impacts from roof or structure-mounted Tier 1 solar projects to a **less than significant level (Class III).**

Ground-mounted Tier 1 SEFs, as well as all Tier 2 and Tier 3 SEFs could include enclosed and open areas containing installation infrastructure (e.g., solar panels, switchgear components, and on-site maintenance operation building/structure), access roads, and fencing. Built structures (buildings, piping, fencing, collector arrays, etc.) would introduce industrial elements into the landscape and likely contrast with surrounding undisturbed areas in form, line, color, and texture. In addition, either underground or aboveground connection is then made to the distribution system. The gen-tie lines would likely be 12 kilovolts (kV) and would be strung on either existing or new 35-foot-tall wood poles.

All ground-mounted SEFs would be subject to a Site Plan Review (County Code Section 22.62.040). Site Plan Review applications are required to include landscape plans, contour maps, adjacent land use information, and elevations, renderings, or perspectives of each proposed structure, identifying the color, texture, and type of all exterior finish and roofing materials. In addition, proposed County Code Section 22.32.050.B specifies minimum setbacks of solar facilities to adjacent parcels, while proposed County Code Section 22.32.050.C specifies height limitations for solar facilities. Furthermore, when siting all SEFs, LUO Section 22.32.040.C.4 requires that they not be located in areas containing scenic geologic resources, such as exposed bedrock or rock outcroppings, and also not be located on significant ridgetops.

Setback standards would minimize visual intrusion to foreground views, the distances in which streamlined solar facilities would have the greatest daytime visibility. Height standards would minimize vertical massing and line-of-sight intrusions from adjacent viewsheds. Proposed County Code Section 22.32.040.A.5 requires all distribution lines less than 60 kV to be located underground. In the event any SEFs include transmission interconnection exceeding this voltage or are placed aboveground, proposed County Code Section 22.32.030.B.3 requires that plans for any new or upgraded overhead transmission lines are included in the project application.

While these existing and proposed County Code requirements will minimize the visual impacts of solar installations, the site-specific setting and visual characteristics of all future SEFs proposed under the streamlining program cannot be known. Therefore, potential remains that certain SEFs could result in an aesthetic incompatibility within public view. Potential for this impact is considered **significant, unavoidable, and adverse (Class I)**.

Impact 3-1-1 – Wind

Implementation of the proposed Program could result in the development of wind energy projects that have a substantial adverse effect on a scenic view. This impact is considered **less than significant (Class III)**.

Streamlining of wind projects under the Program would be limited to Tier 1 WECS, which only includes installations mounted on a roof of a structure or conforming use (refer to **Table 2.0-1** in Section 2.0, Project Description). This scale of wind energy project would not be highly visible because of relatively short vertical tower mounts, small nacelle motors, and short blade lengths. While such rooftop wind turbines may be erected on a structure containing few, if any,

comparable appurtenant vertical structures, they are not expected to result in strong visual contrast. Any visual contrast would be greatest on structures with flat rooftops. While Tier 1 wind turbines may increase visually incongruous "urbanization" associations for viewers, the potential for adverse visual contrast would be reduced because streamlined Tier 1 wind facilities would require an already built conforming structure. Such sites would not be within or on undisturbed natural landscape.

To minimize visual impacts, proposed County Code Section 22.32.060.C specifies height limitations of Tier 1 wind energy installations as 10 feet for agricultural, rural, and public facilities and 5 feet for all other land uses. When compared to the overall height and massing of the conforming structure upon which such turbines would be installed, these height standards minimize visual contrast from adjacent viewsheds. Additionally, proposed County Code Section 22.32.060.D.7 requires all wind turbine surfaces to be an unobtrusive color.

While moving blades may attract visual attention, turbines would take on the general visual appearance of antennas, satellite dishes, and other venting structures regularly affixed to a structure's rooftop. Collectively, multiple turbines would decrease a visual impact (particularly if in close proximity) by providing more horizontal massing that would mimic the structure's rooftop. The adherence to these and all County Code Title 22 requirements ensures Tier 1 WECS projects would result in **less than significant (Class III)** impacts with respect to creating aesthetically incompatible sites open to public view.

Impact 3-1-1 – Policy Changes Implementation of the proposed Program could result in the development of renewable energy projects that have a substantial adverse effect on a scenic view. This impact is considered **significant, unavoidable, and adverse (Class I)**.

While existing and proposed County Code requirements will minimize the visual impacts of solar installations, the site-specific setting and visual characteristics of all future SEFs proposed under the streamlining program cannot be known. Therefore, implementation of the proposed Program could indirectly result in aesthetically incompatible sites open to public view. Potential for this impact is considered **significant, unavoidable, and adverse (Class I)**.

Damage Scenic Resources, Including, but Not Limited to, Trees, Rock Outcroppings, and Historic Buildings Within a Designated Scenic Area (Threshold 2)

Impact 3-1-2 – Solar Implementation of the proposed Program could introduce uses that damage scenic resources. This impact is considered **less than significant (Class III)**.

As discussed in subsection 2.6 in Section 2.0, Project Description, the RE Combining Designation areas exclude streamlining renewable energy facilities in the following locations:

- County-designated visual SRAs
- Certain Highway Corridor Design Standard areas, including scenic highway corridors
- Areas covered by conservation easements
- Parcels in the Open Space land use category

As these designated scenic areas are excluded from the Program, no renewable energy facilities would be sited in these areas as a result of the RESP. Furthermore, as discussed above, all ground mounted SEFs would be subject to a Site Plan Review (County Code Section 22.62.040), as well as height limitations to minimize line-of-sight intrusions into any adjacent scenic viewsheds (proposed County Code Section 22.32.050.C). Furthermore, when siting all SEFs, LUO Section 22.32.040.C.4 requires that they not be located in areas containing scenic geologic resources, such as exposed bedrock or rock outcroppings, and also not be located on significant ridgetops. Therefore, impacts to scenic resources would be **less than significant (Class III)**.

Impact 3-1-2 – Wind Implementation of the proposed Program could introduce uses that damage scenic resources. This impact is considered **less than significant (Class III)**.

Based on the definitions and conditions identified in **Table 2.0-1** (see Section 2.0), Tier 1 WECS projects may be located on scenic lands open to public views. However, these locations would not include those identified above for solar facilities and listed in Section 2.6. As described above under Threshold 1, adherence to proposed County Code Section 22.32.060.C (height limitations of Tier 1 WECS installations), proposed County Code Section 22.32.060.D.7 (requires all wind turbine surfaces to be an unobtrusive color), and all County Code Title 22 requirements would ensure Tier 1 wind energy projects streamlined by the RESP would result in **less than significant (Class III)** impacts at scenic sites open to public view.

Impact 3-1-2 – Policy Changes Implementation of the proposed Program could introduce uses that damage scenic resources. This impact is considered **less than significant (Class III)**.

As described above, the County's designated scenic areas are excluded from the proposed Program and no renewable energy facilities would be sited in these areas as a result of the Program. Therefore, **less than significant (Class III)** impacts from RESP policy changes would occur.

Substantially Degrade the Visual Character of an Area (Threshold 3)

Impact 3-1-3 – Solar Implementation of the proposed Program could substantially degrade the visual character of an area. This impact is considered **significant, unavoidable, and adverse (Class I)**.

Ground mounted SEF projects have the greatest potential to change the visual character of an area, especially the larger Tier 2 and 3 SEFs. As described above under Threshold 1, all ground mounted SEFs would be subject to a Site Plan Review and existing and proposed County Code requirements to minimize the visual impacts of SEFs to the greatest extent possible. While these existing and proposed County Code requirements will minimize the visual impacts of solar installations, the site-specific setting and visual characteristics of all future SEFs proposed under the Program cannot be known. Therefore, implementation of the Program could indirectly result in the development of solar energy projects that substantially degrade the visual character of an area. Potential for this impact is considered **significant, unavoidable, and adverse (Class I)**.

Impact 3-1-3 – Wind Implementation of the proposed Program could substantially degrade the visual character of an area. This impact is considered **less than significant (Class III)**.

Streamlined Tier 1 WECS would require an already built conforming structure. Such sites would not be within or on undisturbed natural landscape. As described above under the Threshold 1, adherence to proposed County Code Section 22.32.060.C (height limitations of Tier 1 wind energy installations), Section 22.32.060.D.7 (requires all wind turbine surfaces shall be an unobtrusive color), and all County Code Title 22 requirements would ensure Tier 1 wind energy projects streamlined by the RESP would result in **less than significant (Class III)** impacts with respect to changing the visual character of an area.

Impact 3-1-3 – Policy Changes Implementation of the proposed Program could substantially degrade the visual character of an area. This impact is considered **significant, unavoidable, and adverse (Class I)**.

As discussed above, it is likely that ground mounted SEFs streamlined by the Program could significantly change the visual character of the area. While existing and proposed County Code requirements will minimize the visual impacts of ground mounted SEFs, the site-specific setting and visual characteristics of all future SEFs proposed under the Program cannot be known. Therefore, implementation of the Program could indirectly result in the development of solar energy projects that substantially change the visual character of an area. Potential for this impact is considered **significant, unavoidable, and adverse (Class I)**.

Create a New Source of Substantial Glare or Night Lighting Which May Affect Surrounding Areas (Threshold 4)

Impact 3-1-4 – Solar Implementation of the proposed Program could result in the creation of glare or night lighting that would affect surrounding areas. This impact is considered **less than significant (Class III)**.

Solar energy collectors rely on mirrored or glass surfaces that are reflective and produce glare. Under certain viewing conditions, these surfaces give rise to specular reflections (glint and glare) visible to stationary or moving receptors. Night lighting for security and panel washing could also be incorporated into the design of ground mounted SEFs.

Structure mounted Tier 1 SEFs would would not result in significant sources of glare or lighting. Given structure mounted Tier 1 SEF characteristics of height, panel size, and typical angle to receive solar rays, these smaller rooftop installations typically do not reflect glare on adjacent ground receptors. Additionally, Tier 1 rooftop facilities are not expected to require nighttime lighting.

As defined in **Table 2.0-1** (see Section 2.0), ground-mounted Tier 1 and all Tier 2 and 3 solar installations have the greatest potential to result in daytime glare and lighting impacts to adjacent receptors. To minimize the impacts of these solar facilities, proposed County Code Section 22.32.050.B specifies minimum setbacks of solar facilities to adjacent parcels. Setback standards will minimize glare intrusion to adjacent receptors. Furthermore, proposed County Code Section 22.32.050.D requires:

- All solar facilities to use nonreflective surfaces that minimize glare to the greatest extent feasible.

- Rotating solar facilities shall have tracking system design and shall not create concentrated reflections directed at occupied structures, recreation areas, County-designated SRAs, or roads.

- Exterior lighting to be activated by motion sensors, fully shielded, and a downcast type where the light does not spill onto adjacent parcels or illuminate the night sky.

These proposed County Code Title 22 requirements ensure solar energy projects streamlined by the RESP would result in **less than significant (Class III)** impacts with respect to creating glare or light to surrounding properties.

Impact 3-1-4 – Wind Implementation of the proposed Program could result in the creation of glare or night lighting that would affect surrounding areas. This impact is considered **less than significant (Class III)**.

RESP streamlining would be limited to Tier 1 wind projects, which only include installations mounted on a roof of a structure or conforming use (refer to **Table 2.0-1** in Section 2.0). This scale of wind energy project would not result in highly reflective surfaces or require nighttime lighting. Proposed County Code Section 22.32.060.D.5.a requires all wind installation materials and surfaces to be nonreflective, and proposed County Code Section 22.32.060.D.7.d requires no lighting, unless required by the Federal the Federal Aviation Administration, which would be at the lowest intensity. Adherence to these Title 22 requirements ensures wind energy projects streamlined by the RESP would result in **less than significant (Class III)** impacts with respect to creating glare or light to surrounding properties.

Impact 3-1-4 – Policy Changes Implementation of the proposed Program could result in the creation of glare or night lighting that would affect surrounding areas. This impact is considered **less than significant (Class III)**.

The implementation of policy changes proposed under the RESP would ensure all streamlined solar and wind projects would not generate adverse glare or lighting that could impact surrounding areas. **Less than significant (Class III)** impacts from RESP policy changes would occur.

Impact Unique Geological or Physical Features (Threshold 5)

Impact 3-1-5 – Solar Implementation of the proposed Program could result in impacts to unique geological or physical features. This impact is considered **less than significant (Class III)**.

Structure mounted Tier 1 SEFs would not impact unique geological or physical features. As discussed under the analysis of Threshold 2, ground mounted SEFs would not be sited within County-designated SRAs, areas covered by conservation easements, or parcels in the Open Space land use category. Therefore, ground mounted SEFs proposed under the Program would not impact unique geological or physical features. **Less than significant (Class III)** impacts would occur.

Impact 3-1-5 – Wind Implementation of the proposed Program could result in impacts to unique geological or physical features. This impact is considered **less than significant (Class III)**.

RESP streamlining would be limited to Tier 1 wind projects, which are limited to installations mounted on a roof of a structure or conforming use. Therefore, because these streamlined

installations would be located on an existing structure on previously disturbed land, they would not be located on, or result in, changes to unique geological or physical features. Additionally, proposed updates to Section 22.32.040.C.4

The existing County of San Luis Obispo General Plan does not identify any prominent geologic features in the county. Figure 6.5-1 of the Renewable Energy Streamlining Program (RESP) Opportunities and Constraints Technical Study (OCTS) identifies only rock outcroppings throughout the county as geologic features. Some rock outcroppings are located in areas not under County jurisdiction (i.e., Carrizo Plain National Monument). Some of the rock outcroppings identified are located in areas that are identified as Unlikely to Streamline Renewable Energy, while the rest are located in areas that are Potentially Able to Streamline Energy.

Therefore, based on existing information on locations of rock outcroppings and those areas identified as areas with environmental constraints (such as unique geologic features, which includes rock outcroppings), streamlined Tier 1 wind facilities would not be located on or result in changes to or impact views of unique geological or physical features. **Less than significant (Class III)** impacts would occur.

Impact 3-1-5 – Policy Changes Changes to countywide policies resulting from the proposed Program could result in impacts to unique geological or physical features. This impact is considered **less than significant (Class III)**.

The implementation of policy changes proposed under the RESP would ensure all streamlined solar and wind projects proposed under the Program would avoid impacts to unique geological or physical features. **Less than significant (Class III)** impacts from RESP policy changes would occur.

CUMULATIVE IMPACTS

The largest geographic scope for cumulative analysis for aesthetics and visual resources is generally the foreground (less than 1 mile for Tier 1 solar or wind projects) and up to middleground viewsheds from a Tier 2 or Tier 3 SEF (up to 3 miles). The greatest cumulative extent for visual impacts would be from a maximum graded 160-acre Tier 3 SEF site. Because renewable energy projects streamlined by the RESP could be built anywhere within the allowable RE Combining Designation areas, the cumulative geographic scope for visual impacts is anywhere within foreground or middleground views of these areas.

During construction of streamlined renewable projects, activities and equipment visible from residences, public roads, and other public viewsheds would result in short-term diminished scenic quality for viewers. Examples include dust and exhaust emissions, removal of vegetation during site clearing, contouring and grading associated with construction, presence of vehicles and equipment, material delivery and staging, assembly of components, and construction workers. However, all cumulative development projects would have similar construction activities resulting in short-term visual impacts to scenic quality. Due to the site-specific nature of construction, only projects sharing foreground views could combine with the construction of streamlined facilities under the RESP to result in a cumulative short-term diminished scenic quality. Because visual impacts from construction are short term, the RESP is not considered to cumulatively contribute to significant temporary visual impacts.

The larger Tier 2 and Tier 3 SEFs would likely include roads, areas of persistent surface and vegetation clearance, and other elements that could create visual contrast in form, line, color,

and texture as compared to pre-project conditions. Cumulative development sharing foreground and possibly middleground views of these facilities—as well as any associated glare, reflectivity, and lighting—may increase overall visual contrast and result in a cumulative change to the visual character of an area. The potential for such impacts would be greatest at viewsheds of surrounding undeveloped land where cumulative development results in long-term diminished scenic quality.

While existing and proposed County Code requirements will minimize the visual impacts of solar installations, the site-specific setting and visual characteristics of all future SEFs proposed under the streamlining program cannot be known. Therefore, implementation of the proposed Program could indirectly result in a considerable contribution to a cumulative visual resources impact.

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3.2 Agricultural Resources

Agriculture is an important part of San Luis Obispo County's economy, and the preservation of agricultural land is a major priority for the County. The county's diverse agriculture production includes over 100 different crops, with fruit and vegetables as the largest sector economically. Siting renewable energy projects in areas with valuable agricultural soils, strong agricultural infrastructure, and long-established agricultural communities could impact the County's efforts to support agricultural preservation and a prosperous agricultural economy. This section describes existing agricultural areas in San Luis Obispo County, characterizes agricultural land uses, and discusses adopted plans and policies pertinent to the region. The analysis then addresses potential impacts associated with the Renewable Energy Streamlining Program (RESP or Program).

3.2.1 PHYSICAL SETTING

The inland areas of the county have relatively hot, dry summers, while areas closer to the coast have milder year-round temperatures. Some of the county's highest-value crops are grown on soils that are not classified as Prime Farmland. The current distribution of high-value crops in the county is related to a number of factors, including natural resources, climate, land use, and access to transportation networks.

The value of San Luis Obispo County's agricultural crops was $861,803,000 in 2012 (SLO County Department of Agriculture 2012), and a recent study indicates that agriculture contributes $1.87 billion annually to the county's economy (Agricultural Impact Associates 2013). The county's 20 highest value crops in 2012 are shown in **Table 3.2-1**.

TABLE 3.2-1
SAN LUIS OBISPO COUNTY'S HIGHEST VALUE CROPS IN 2012

1. Strawberries	$205,000,000	11. Napa Cabbage	$12,042,000
2. Wine Grapes (all)	$197,940,000	12. Rangeland Grazed	$10,200,000
3. Cattle/Calves	$69,492,000	13. Lemons	$9,064,000
4. Broccoli	$51,177,000	14. Celery	$8,676,000
5. Vegetable Transplants	$32,227,000	15. Cauliflower	$6,665,000
6. Cut Flowers	$23,821,000	16. Leaf Lettuce	$5,938,000
7. Indoor Decorative Plants	$20,772,000	17. Bell Peppers	$5,492,000
8. Avocados	$18,419,000	18. Alfalfa Hay	$4,211,000
9. Head Lettuce	$13,183,000	19. Grain Hay	$4,153,000
10. Outdoor Ornamentals	$12,750,000	20. Cabbage	$4,148,000

Source: SLO County Department of Agriculture 2012

Farmland Classification

County agricultural zoning is shown in **Figure 3.2-1**. Under the County's General Plan and zoning ordinances, 1,392,186 acres are designated for agricultural use.[1]

[1] This acreage represents zoning designations only. The number of acres designated for agriculture does not exactly equal any particular characterization of agricultural soil quality.

Important farmland is designated in a variety of ways by different agencies. The primary method of classifying farmland for this EIR is the County's designation and mapping of Important Agricultural Soils, which takes into account both federal and state farmland classifications as described below.

County of San Luis Obispo Important Agricultural Soils

The County's Conservation and Open Space Element (COSE) designates Important Agricultural Soils and includes several goals and policies related to conserving these soils. Designated Important Agricultural Soils are mapped in Figure SL-1 and listed in Table SL-2 of the Conservation and Open Space Element. **Figure 3.2-2a** shows designated Important Agricultural Soils throughout the county. **Figure 3.2-2b** shows the county's designated Important Agricultural by category. The county's Important Agricultural Soil types are as follows:

- **Prime Farmland**. The Conservation and Open Space Element defines Prime Farmland using both federal and state definitions of land that are considered "prime" lands for farming. The US Department of Agriculture (USDA) Natural Resources Conservation Service (NRCS) has defined these lands as "prime farmland" in the Code of Federal Regulations for Agriculture. The State of California also defines lands that are prime for farming as prime agricultural land. Prime Agricultural Soils are defined in the County's Agriculture Element, Land Use Ordinance, and Coastal Zone Land Use Ordinance.
- **Farmland of Statewide Importance**. Farmland of Statewide Importance is defined by the NRCS in the Code of Federal Regulations for Agriculture. Like Prime Farmland, this category is based on physical and chemical properties of the soil, not whether land is irrigated.
- **Other Productive Soils**. This category includes Unique Farmland, as defined by the NRCS in the Code of Federal Regulations for Agriculture. Most soils must have a soil slope of 30 percent or less and all must meet at least two of the following three criteria: (1) Storie Index rating is fair, good, or excellent; (2) Irrigated Capability Class is 1–6; and (3) more than 3 percent of the soil type is in irrigated/permanent crop use as of 2008. Criteria 1 and 2 are based on information from the Web Soil Survey. Criterion 3 is based on GIS cropland mapping by the San Luis Obispo County Department of Agriculture.
- **Highly Productive Rangeland Soils**. These soils meet all of the following criteria as identified on the Web Soil Survey: (1) produce forage that is equivalent to 60 percent or more of the maximum normal year forage production for that soil survey area; (2) majority of the forage produced is herbaceous; and (3) slope is less than 30 percent (except select soil types).

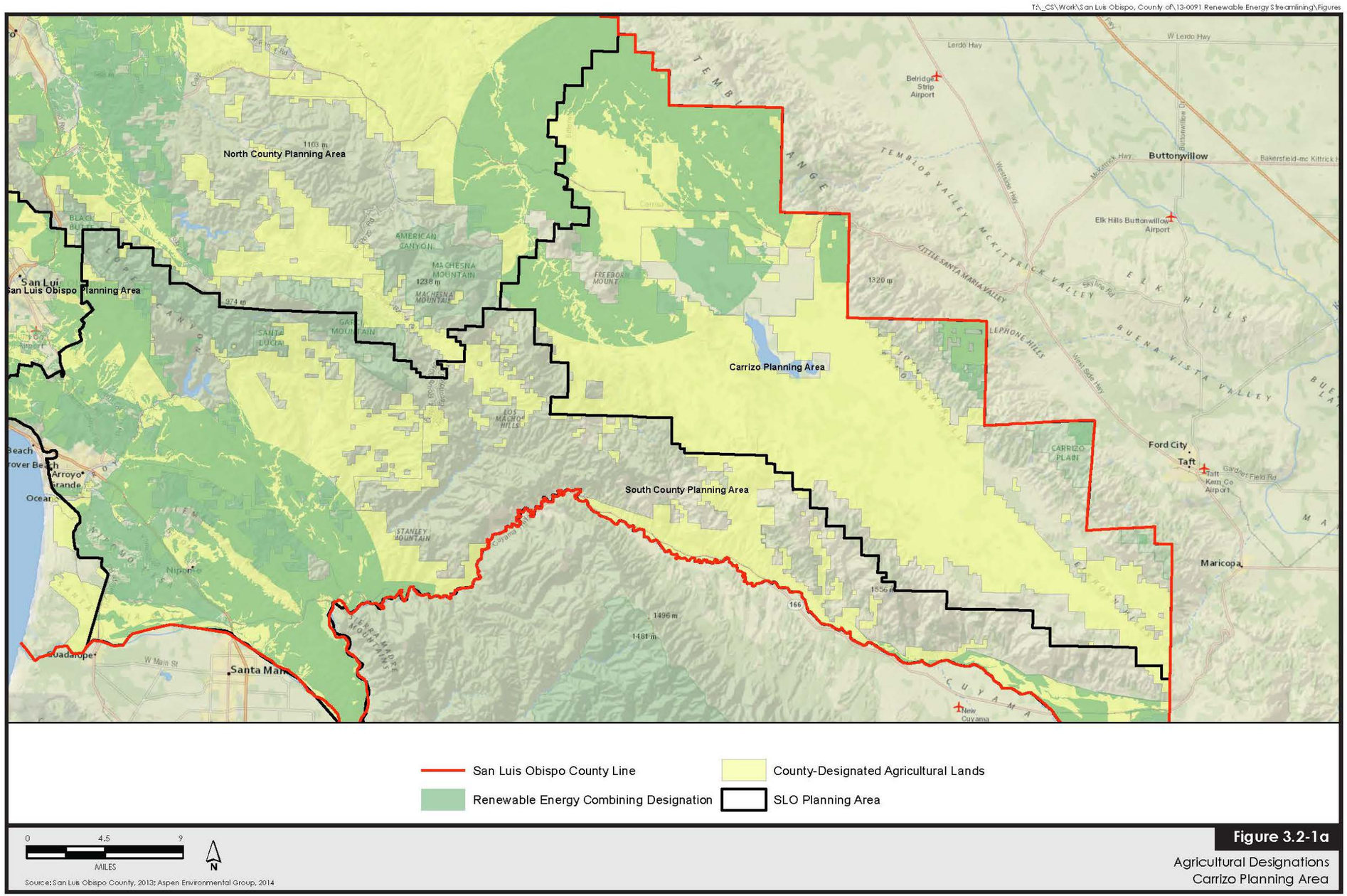

Figure 3.2-1a
Agricultural Designations
Carrizo Planning Area

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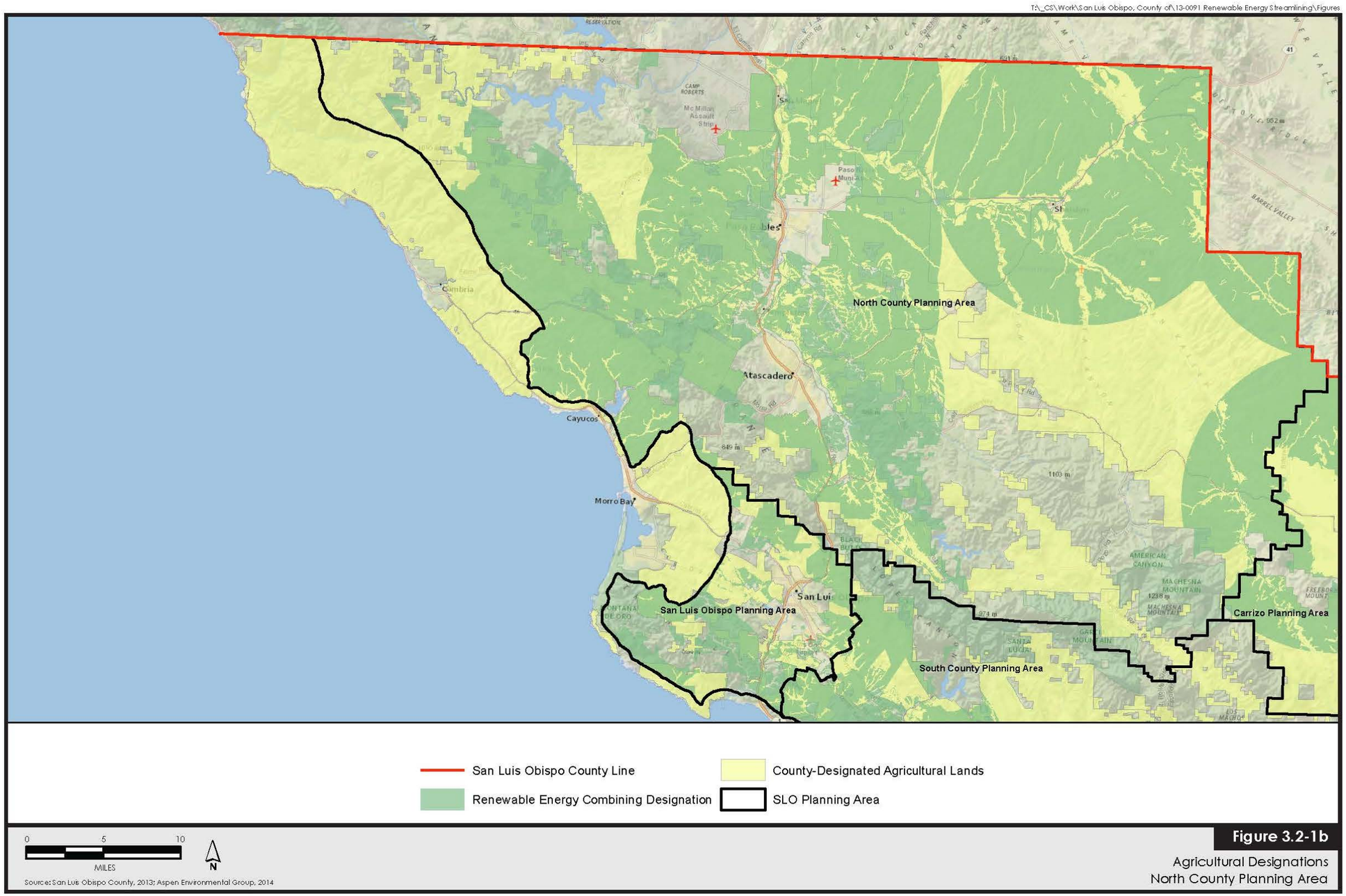

Figure 3.2-1b
Agricultural Designations
North County Planning Area

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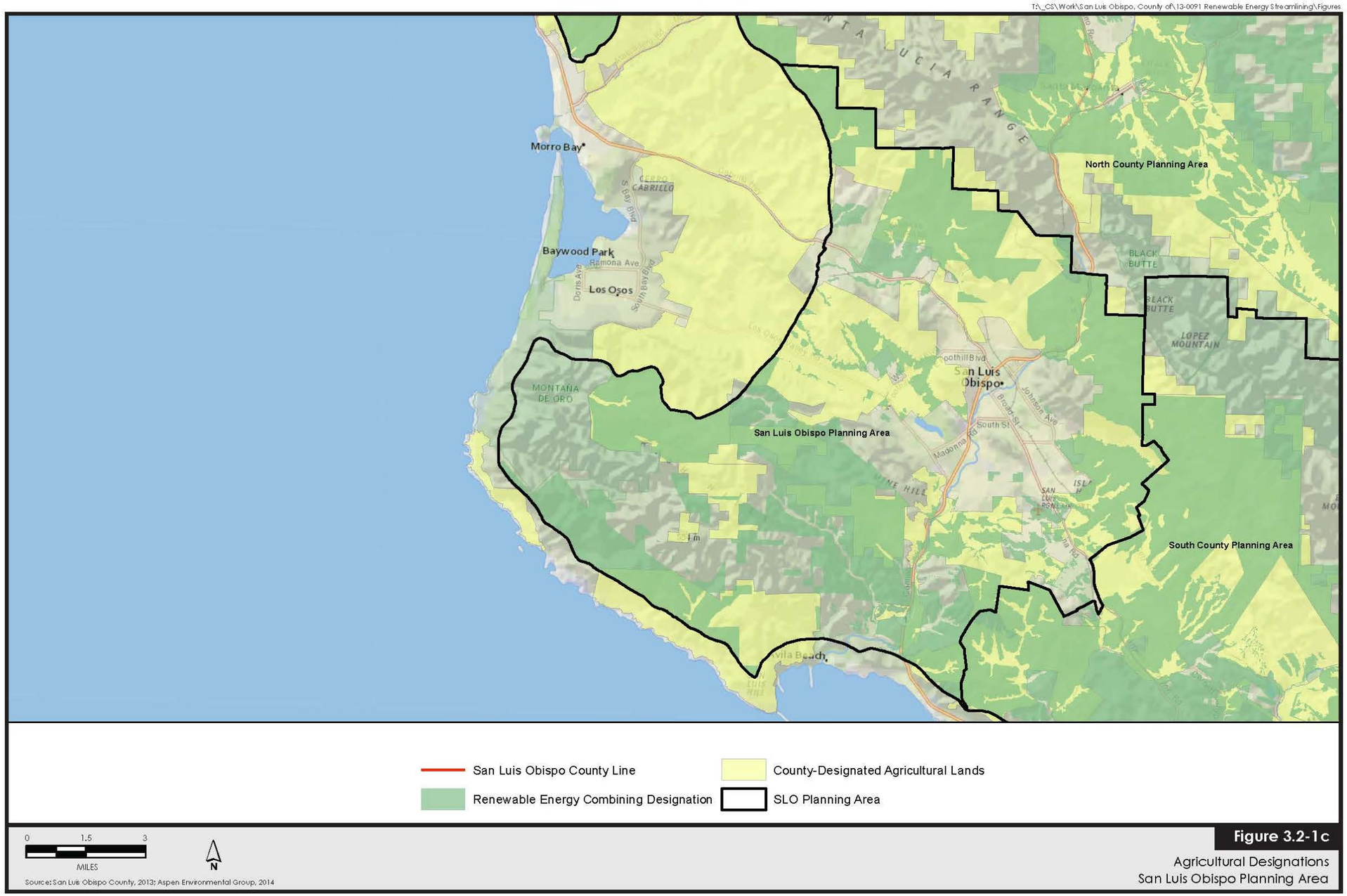

Figure 3.2-1c
Agricultural Designations
San Luis Obispo Planning Area

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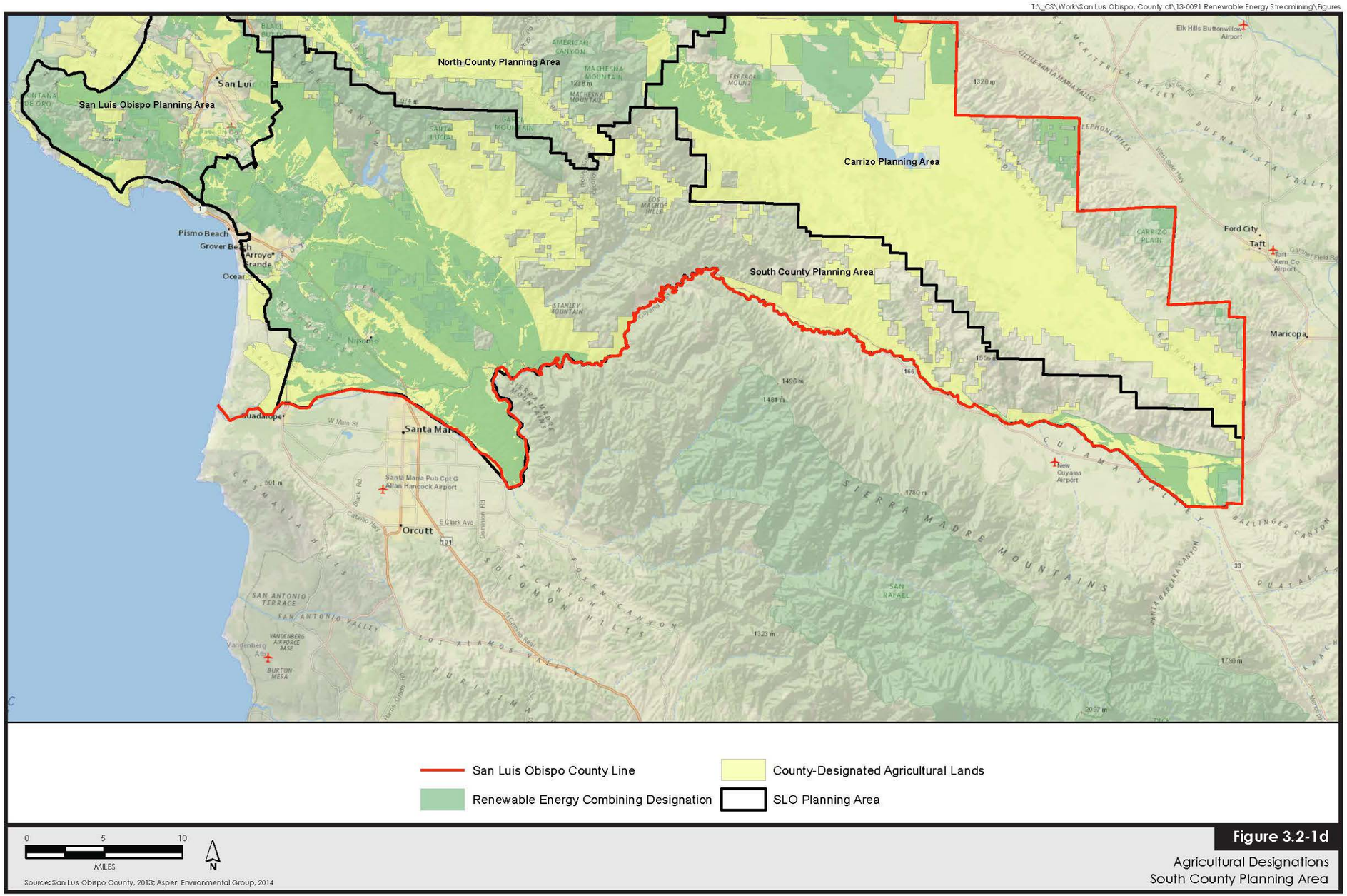

Figure 3.2-1d
Agricultural Designations
South County Planning Area

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The countywide acreage of Important Agricultural Soils is shown in **Table 3.2-2**.

TABLE 3.2-2
SAN LUIS OBISPO COUNTY IMPORTANT AGRICULTURAL SOILS

Category	Acres
Prime Farmland	320,016
Statewide Importance	92,092
Other Productive Soils	223,695
Highly Productive Range Soils	114,581
Total	750,384

Source: SLO County 2013

California Farmland Mapping and Monitoring Program

The Farmland Mapping and Monitoring Program (FMMP) applies the NRCS soil classifications and land use information to identify agricultural lands. Described below are the agricultural lands categories mapped by the FMMP.

- **Prime Farmland**. Farmland that has the best combination of physical and chemical features able to sustain long-term agricultural production. This land has the soil quality, growing season, and moisture supply needed to produce sustained high yields. Land must have been used for irrigated agricultural production at some time during the four years prior to the mapping date.
- **Farmland of Statewide Importance**. Farmland similar to Prime Farmland but with minor shortcomings, such as greater slopes or less ability to store soil moisture. Land must have been used for irrigated agricultural production at some time during the four years prior to the mapping date.
- **Unique Farmland**. Farmland of lesser quality soils used for the production of the state's leading agricultural crops. This land is usually irrigated but may include nonirrigated orchards or vineyards as found in some climatic zones in California. Land must have been cropped at some time during the four years prior to the mapping date.
- **Farmland of Local Importance**. Land of importance to the local agricultural economy as determined by each county's board of supervisors and a local advisory committee.
- **Grazing Land**. Land on which the existing vegetation is suited to the grazing of livestock. This category was developed in cooperation with the California Cattlemen's Association, the University of California Cooperative Extension, and other groups interested in the extent of grazing activities. The minimum mapping unit for Grazing Land is 40 acres.
- **Urban and Built-Up Land**. Land occupied by structures with a building density of at least 1 unit to 1.5 acres, or approximately 6 structures to a 10-acre parcel. This land is used for residential, industrial, commercial, institutional, public administrative purposes, railroad and other transportation yards, cemeteries, airports, golf courses, sanitary landfills, sewage treatment, water control structures, and other developed purposes.

Land Capability Classification

The Land Capability Classification indicates the suitability of a soil for growing field crops based on factors including slope, depth, texture, erosion, wetness, permeability, and fertility (USDA 2014). The Land Capability Classification rates soils based on their ability to grow crops without loss of production over time. Soils are rated as Class 1 to Class 8, with Class 1 being the best suited for agriculture. The classes are defined as follows:

- Class 1 soils have slight limitations that restrict their use.
- Class 2 soils have moderate limitations that reduce the choice of plants or require moderate conservation practices.
- Class 3 soils have severe limitations that restrict the choice of plants or require special conservation practices, or both.
- Class 4 soils have very severe limitations that restrict the choice of plants or require very careful management, or both.
- Class 5 soils have little or no hazard of erosion, but have other limitations, impractical to remove, that limit their use mainly to pasture, range, forestland, or wildlife food and cover.
- Class 6 soils have severe limitations that make them generally unsuited to cultivation and that limit their use mainly to pasture, range, forestland, or wildlife food and cover.
- Class 7 soils have very severe limitations that make them unsuited to cultivation and that restrict their use mainly to grazing, forestland, or wildlife.
- Class 8 soils and miscellaneous areas have limitations that preclude their use for commercial plant production and limit their use to recreation, wildlife, or water supply or for aesthetic purposes.

Subclasses are sometimes connected with several of the above soil classes to provide additional information by indicating the dominant limiting factor for production, including susceptibility to erosion, poor drainage, shallow rooting zone, or climate.

Williamson Act Lands

The Williamson Act (California Land Conservation Act of 1965) enables participating local governments to enter into land conservation contracts with private landowners restricting specific parcels of land to agricultural uses for a minimum term of 10 years in return for reduced property tax assessments.

The Williamson Act program is locally administered by counties (and some cities) to ensure compliance with the Williamson Act (Government Code Sections 51200–51207), local uniform rules, and individual contracts. The California Department of Conservation (DOC) provides guidance and oversight to local governments to ensure consistency with the Government Code. Starting in 1972, the State provided counties with partial replacement of foregone local property tax revenues (Open Space Subvention Act). These subvention payments were suspended in 2009 due to state-level budget constraints.

Establishment of an agricultural preserve is a prerequisite for landowners to enter into a land conservation contract with a county. A land conservation contract is a contract entered into by and between the property owner and lien holders (if any) and the county to restrict the use of the land for agricultural and compatible uses for a minimum term of 10 years or more. Each

year, the contract automatically renews unless a notice of nonrenewal is served on the county or city, a public acquisition occurs, or an application for cancellation is approved. In return, the land is taxed based on the income generated from the agricultural use of the land as opposed to its unrestricted market value.

Local program eligibility is based on acreage, soil type, intensity of agricultural use, and irrigated or nonirrigated status. Minimum acreage requirements for contracts within prime-land preserves start at 10 acres for Class 1 and 2 irrigated cropland, 20 acres for irrigated orchards and vineyards on lesser quality soil, and 40 acres for irrigated Class 3 and 4 soils with crops such as irrigated alfalfa. Dry farmland requires 160 acres and grazing land requires a minimum of 320 acres to qualify for an agricultural preserve and contract. County Williamson Act land is shown in **Figures 3.2-4a** through **3.2-4d**.

A significant amount of land in the county is under longstanding land conservation contract, much of it from the early to mid 1970s. Although the acreage fluctuates from year to year as new contracts are entered into and some terminate due to nonrenewal or public acquisition, as of January 1, 2013, there were 786,483 acres enrolled in Williamson Act contracts in San Luis Obispo County (SLO County Assessor 2013). This acreage represents approximately 37 percent of the land in the county (not including state and federal land).

Due to abuses of the program in some localities, a significant revision to the Williamson Act known as the Laird Bill was passed in 2004, which tightened up permissible land uses on contracted land. Landowners violating these new provisions can be subject to significant fines if structures and land uses are found to be in "material breach."

Other Protected Agricultural Areas

Conservation easements are partial interests in land that allow easement holders (usually land trusts or public agencies) to restrict land uses on private properties. A landowner sells or donates the rights to use the property in certain ways (e.g., subdivide and develop, convert to nonagricultural use), and these rights are permanently severed from the underlying title to the property. All future owners are bound by the original conservation easement restrictions. Agricultural lands covered by conservation easements would be off limits to renewable energy development unless such development is specifically allowed in the conservation easement agreement covering the property.

There are conservation easements, including agricultural preservation easements, throughout the county. Just one of these easements, Hearst Ranch, covers approximately 80,000 acres. Because the conservation easements are on private land, they are more difficult to track than public protected lands. In California, conservation easements created using any public funds are supposed to be tracked in the statewide conservation easement registry, but this registry holds basic information for only a small percentage of the easements in California (Morris and Rissman 2010). As of 2001, all conservation easements are also supposed to be indexed by county recorders, per California Government Code Section 27255.

Important Farmland and Williamson Act Land by Planning Area

A summary of the agricultural resources in each planning area is included **Table 3.2-3**.

TABLE 3.2-3
ACRES OF AGRICULTURAL LAND BY PLANNING AREA[1]

	Planning Area			
	Carrizo	**North County**	**San Luis Obispo**	**South County**
County-Designated Agriculture Land	265,253	737,944	43,236	228,301
County-Designated Important Agriculture Soils				
Prime	115,946	131,976	11,566	41,324
Statewide Importance	0	0	4,013	0
Important Rangeland Soils	51,226	0	2,427	7,076
Other	59	181,101	6,915	19,846
Total[2]	*167,231*	*313,077*	*24,921*	*68,246*
Williamson Act and Farmland Security Zone				
Williamson Act	103,717	490,319	16,234	109,262
Farmland Security Zone	0	296	0	0

Source: SLO County 2013

1. The Coastal Zone Planning Area is excluded because it is not covered by the RESP.

2. Only Important soils; Agriculture designation also occurs on other soils not designated as Important.

Carrizo Planning Area

The Carrizo Planning Area contains 265,253 acres of County-designated agricultural land, including 167,231 acres of Important Agricultural Soils and 103,717 acres enrolled in Williamson Act contracts. The Carrizo Planning Area consists of undulating terrain devoted almost exclusively to dry farming and rangeland. Agriculture has traditionally has been the principal industry in the region (SLO County 2014a).

Irrigated production has increased during the last 10 years, particularly vineyards and alfalfa in the north end of the planning area. The rest of the planning area uses relatively little water for dry farm and grazing operations, but the bottomland acreages suitable for irrigation are constrained by available water supplies. Therefore, the estimated safe annual yield of the underlying basins might be insufficient to irrigate all lands of otherwise suitable topography and soil (SLO County 2014a).

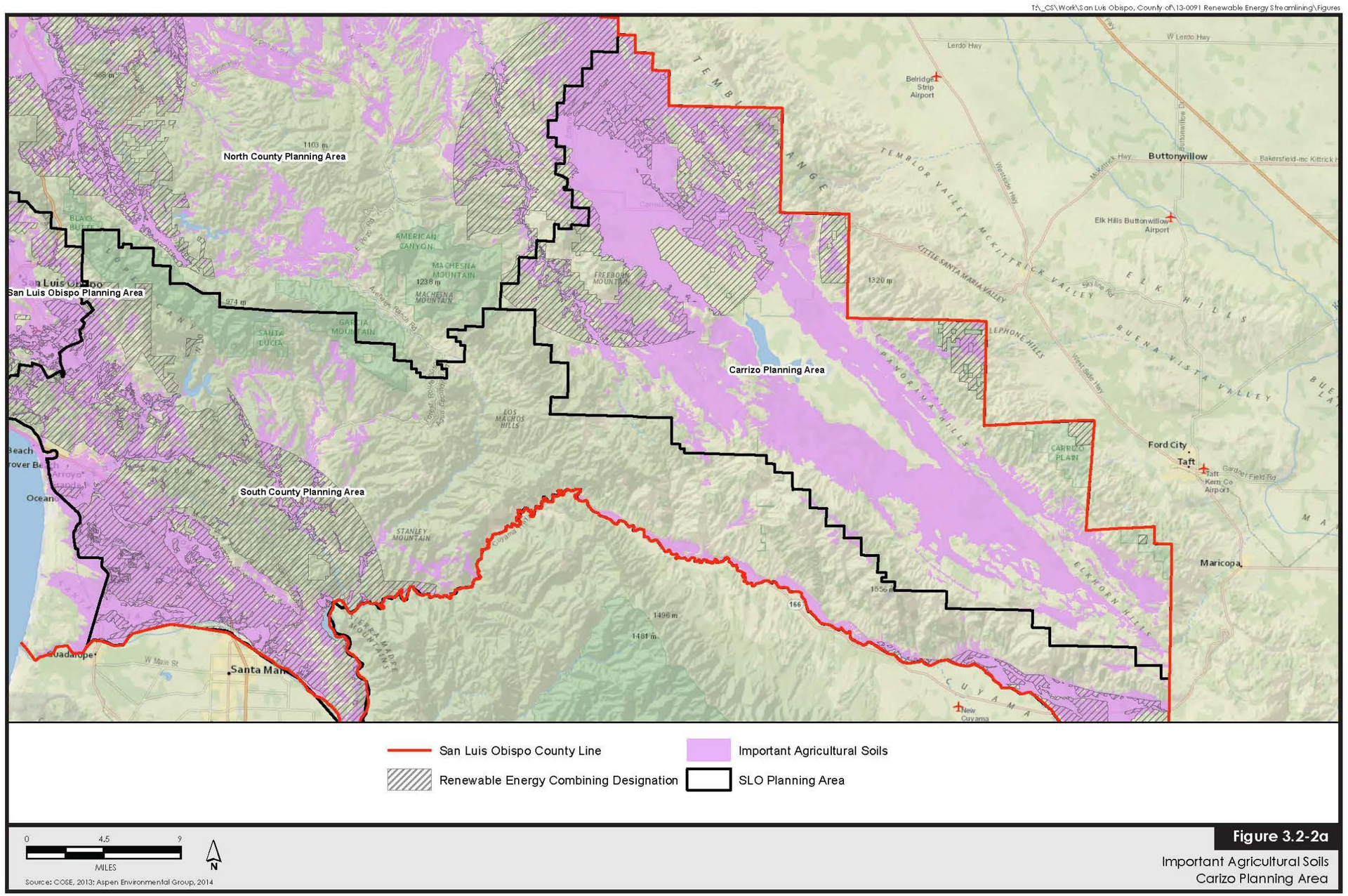

Figure 3.2-2a
Important Agricultural Soils
Carizo Planning Area

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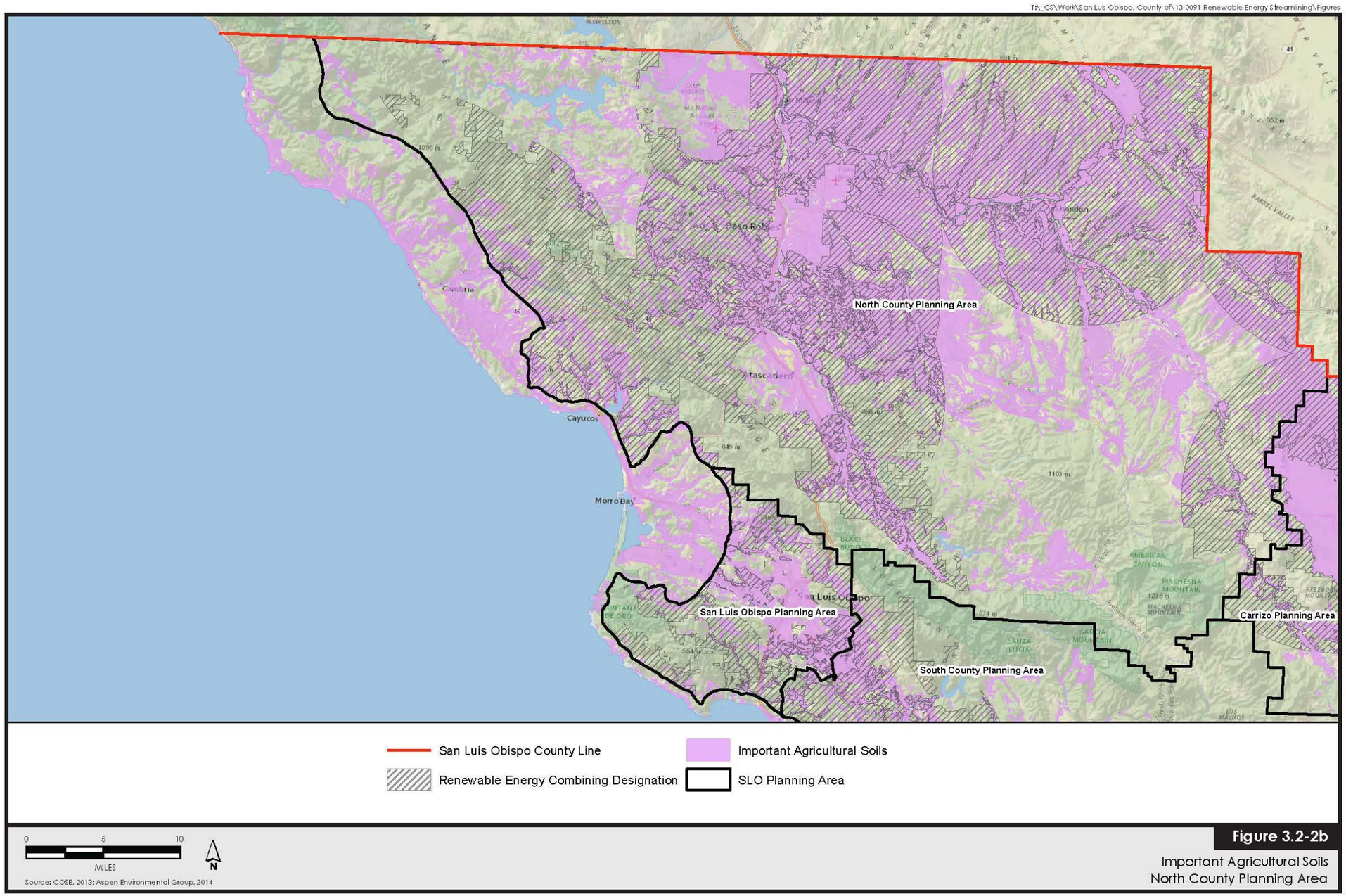

Figure 3.2-2b
Important Agricultural Soils
North County Planning Area

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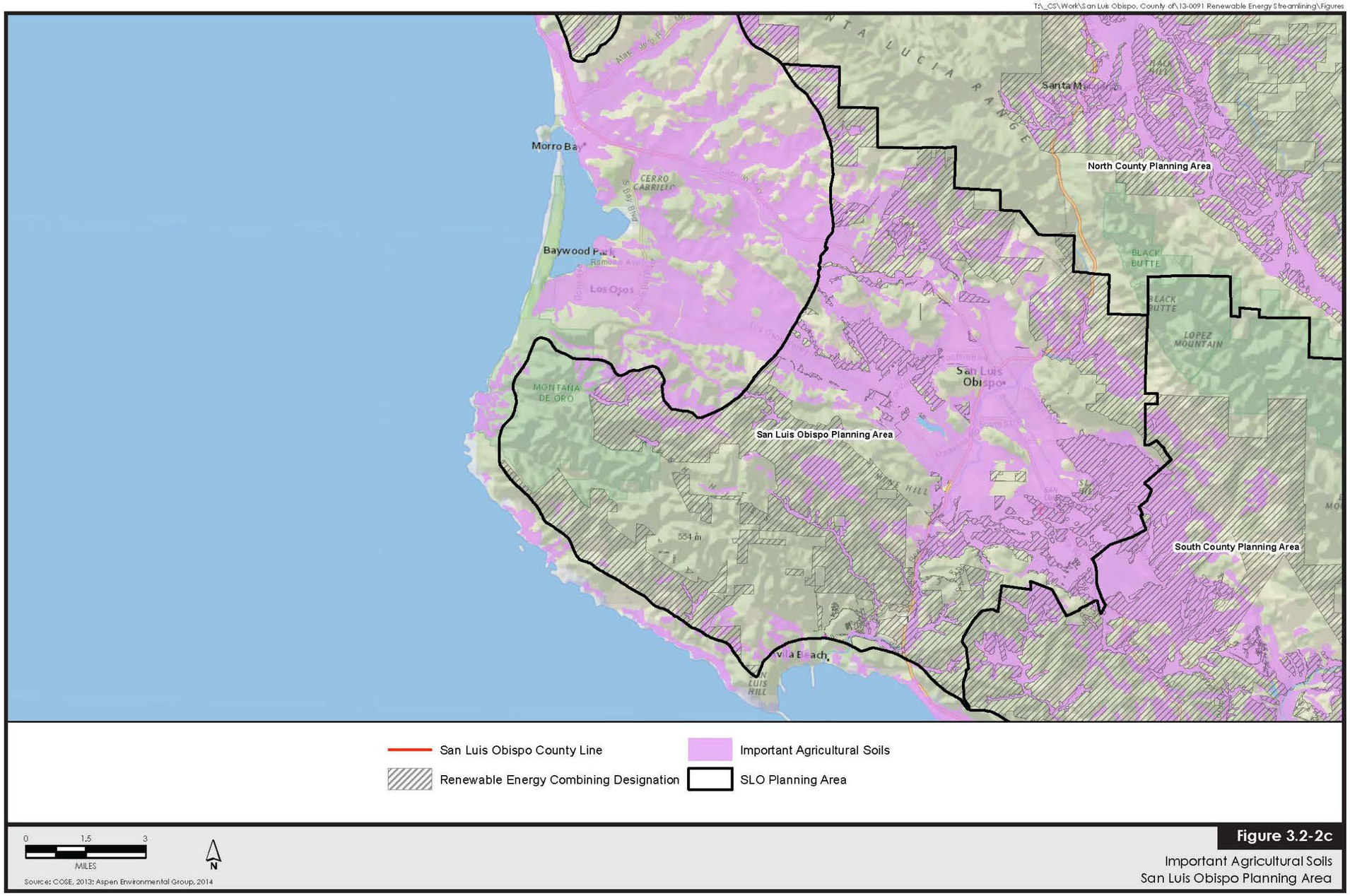

Figure 3.2-2c

Important Agricultural Soils
San Luis Obispo Planning Area

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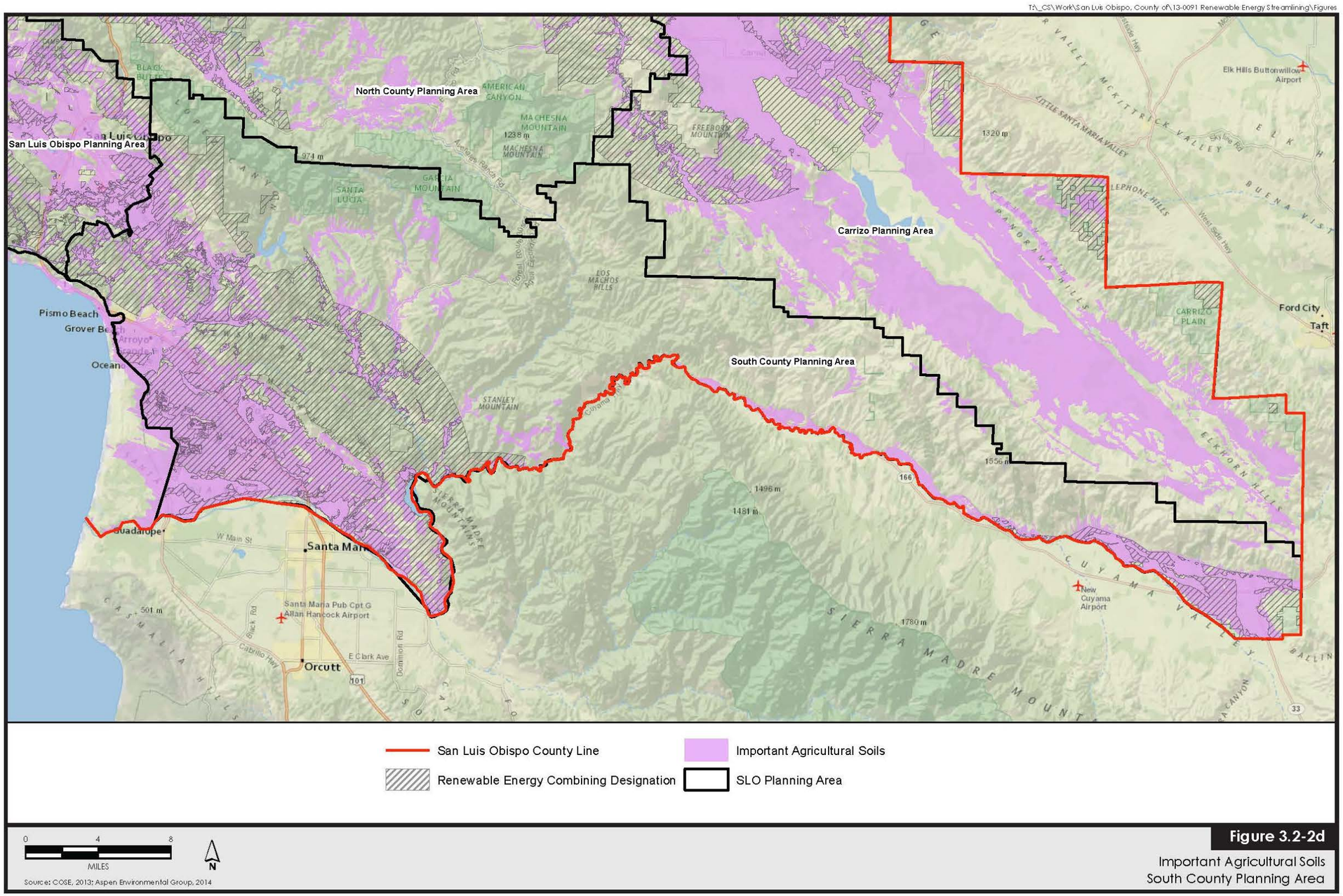

Figure 3.2-2d
Important Agricultural Soils
South County Planning Area

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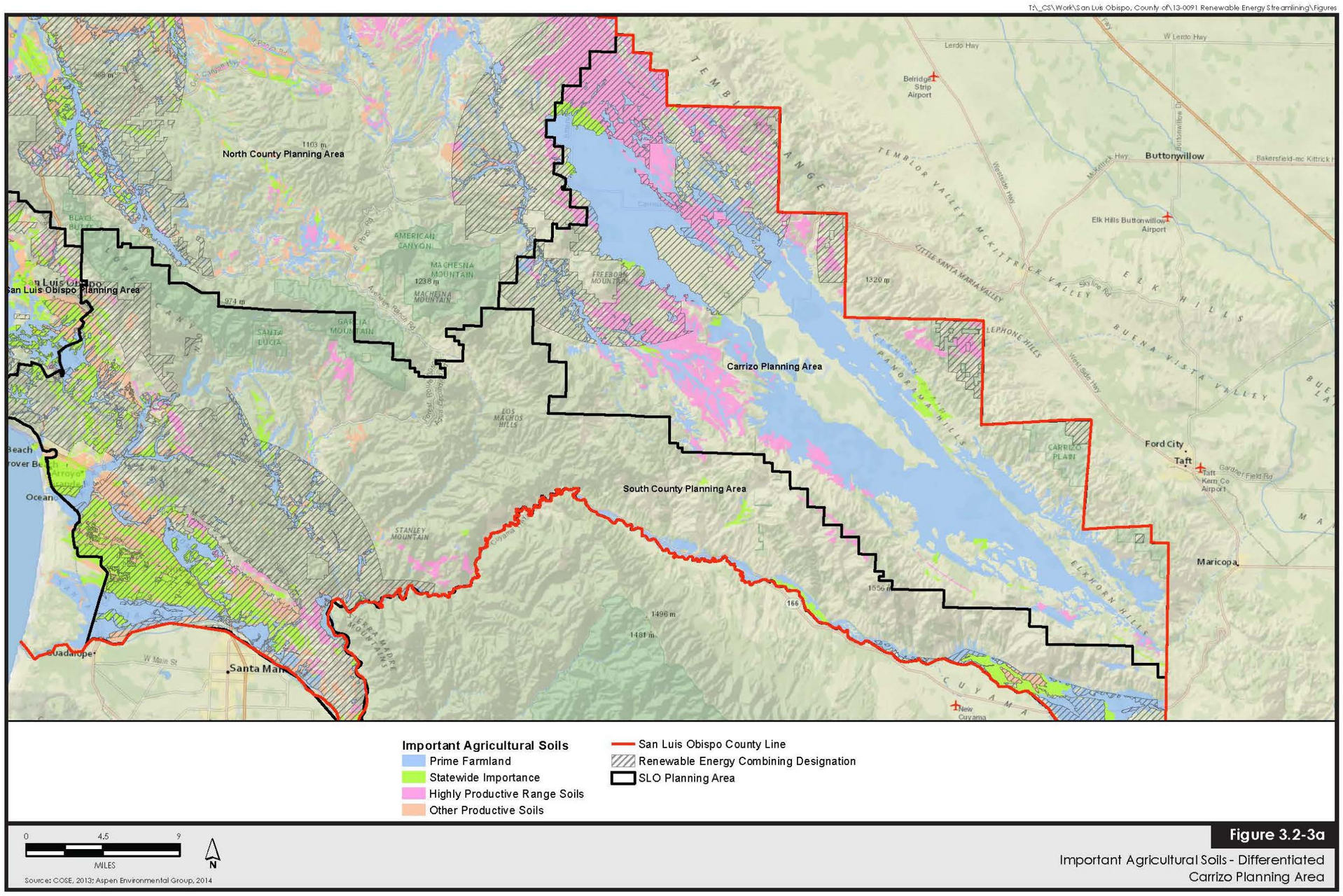

Figure 3.2-3a

Important Agricultural Soils - Differentiated
Carrizo Planning Area

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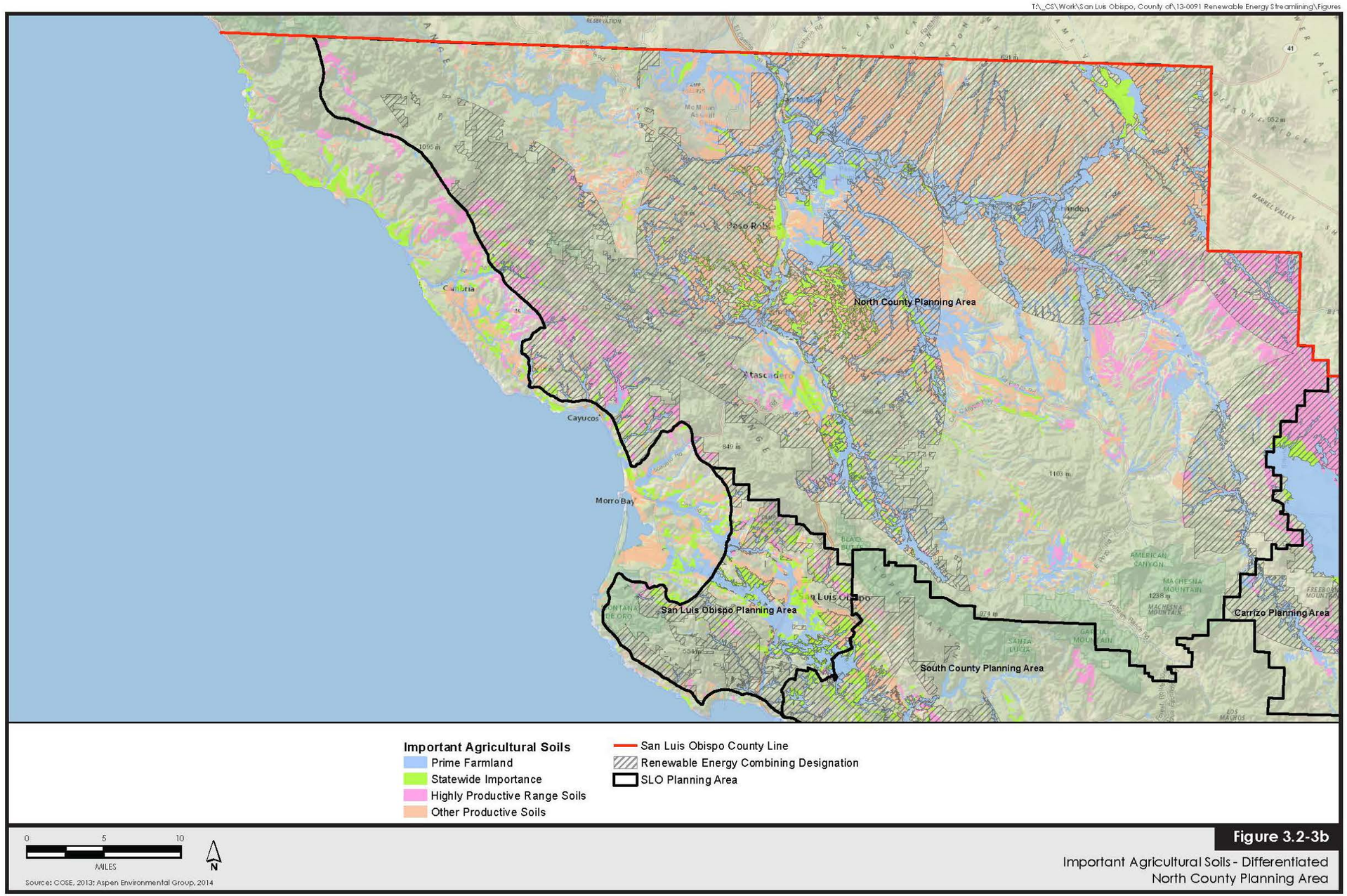

Figure 3.2-3b

Important Agricultural Soils - Differentiated
North County Planning Area

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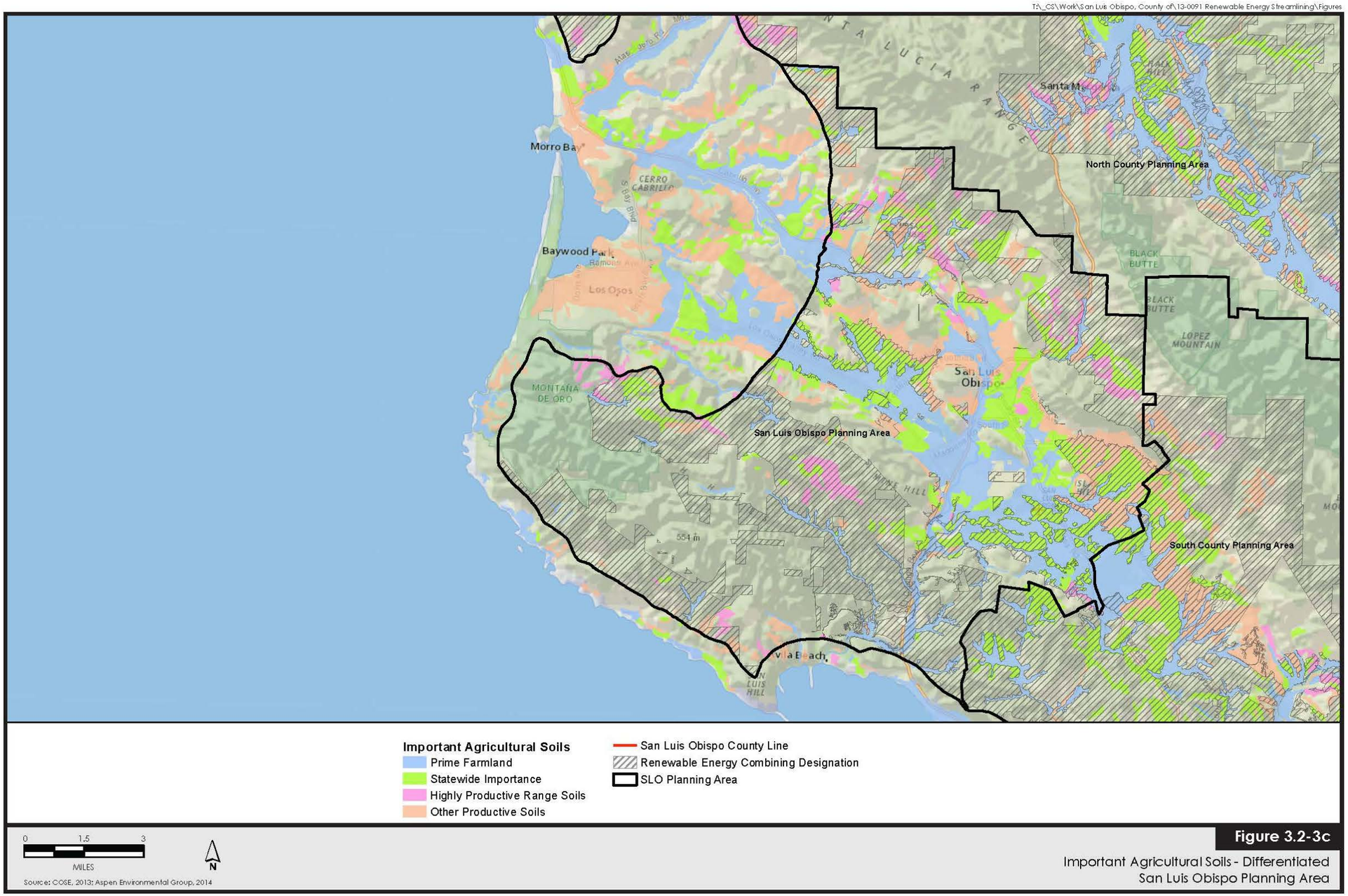

Figure 3.2-3c

Important Agricultural Soils - Differentiated
San Luis Obispo Planning Area

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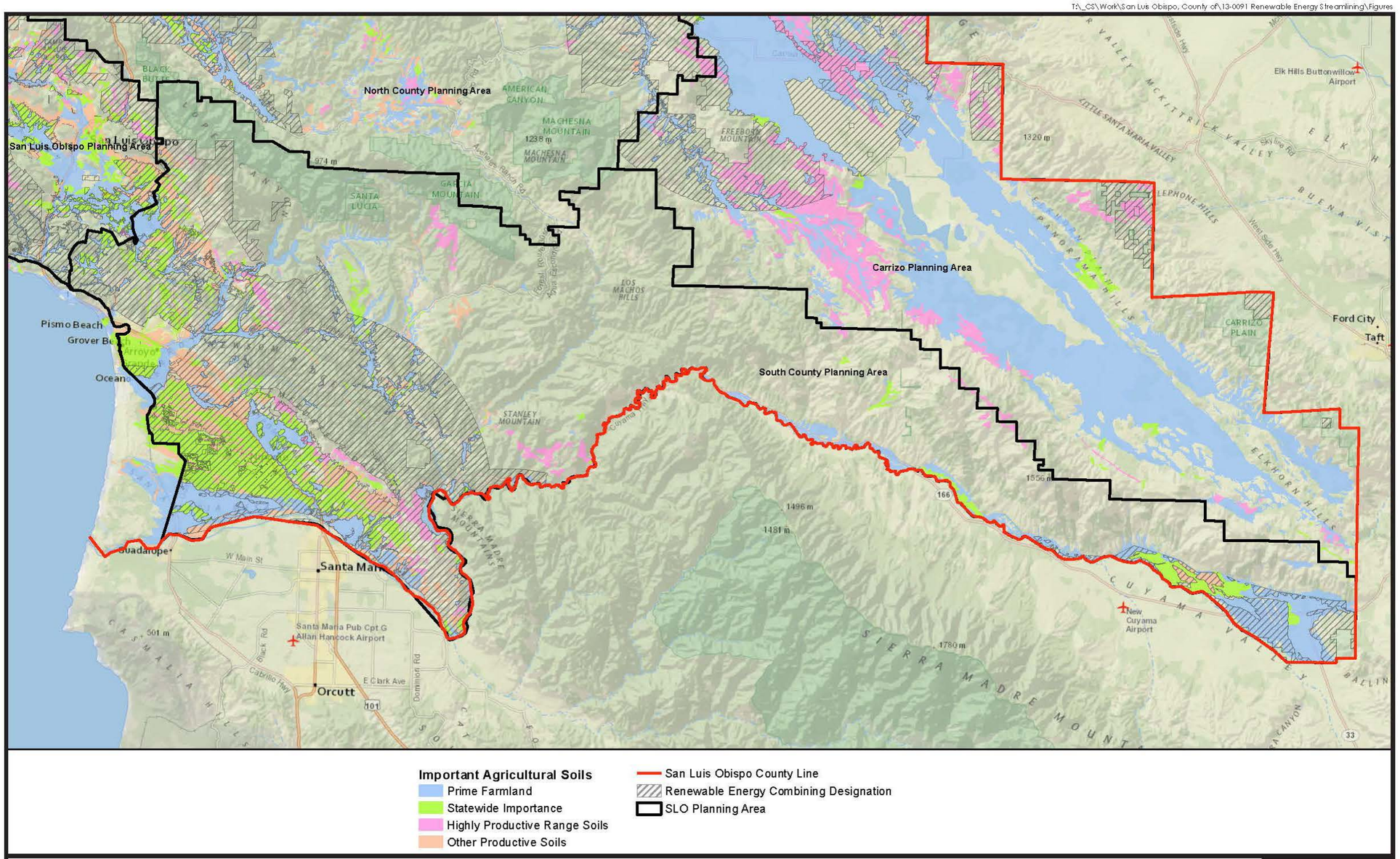

Figure 3.2-3d

Important Agricultural Soils - Differentiated
South County Planning Area

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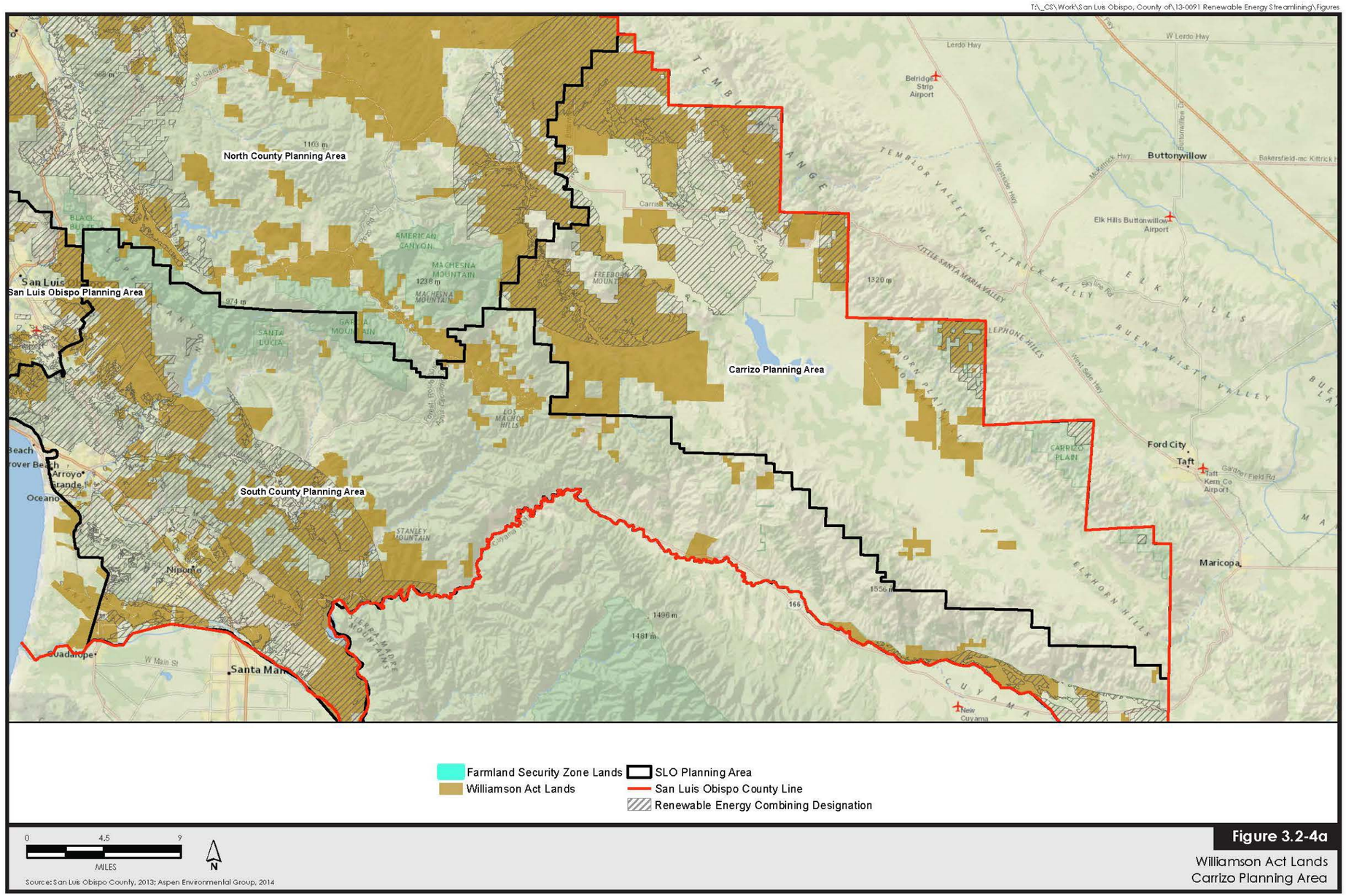

Figure 3.2-4a
Williamson Act Lands
Carrizo Planning Area

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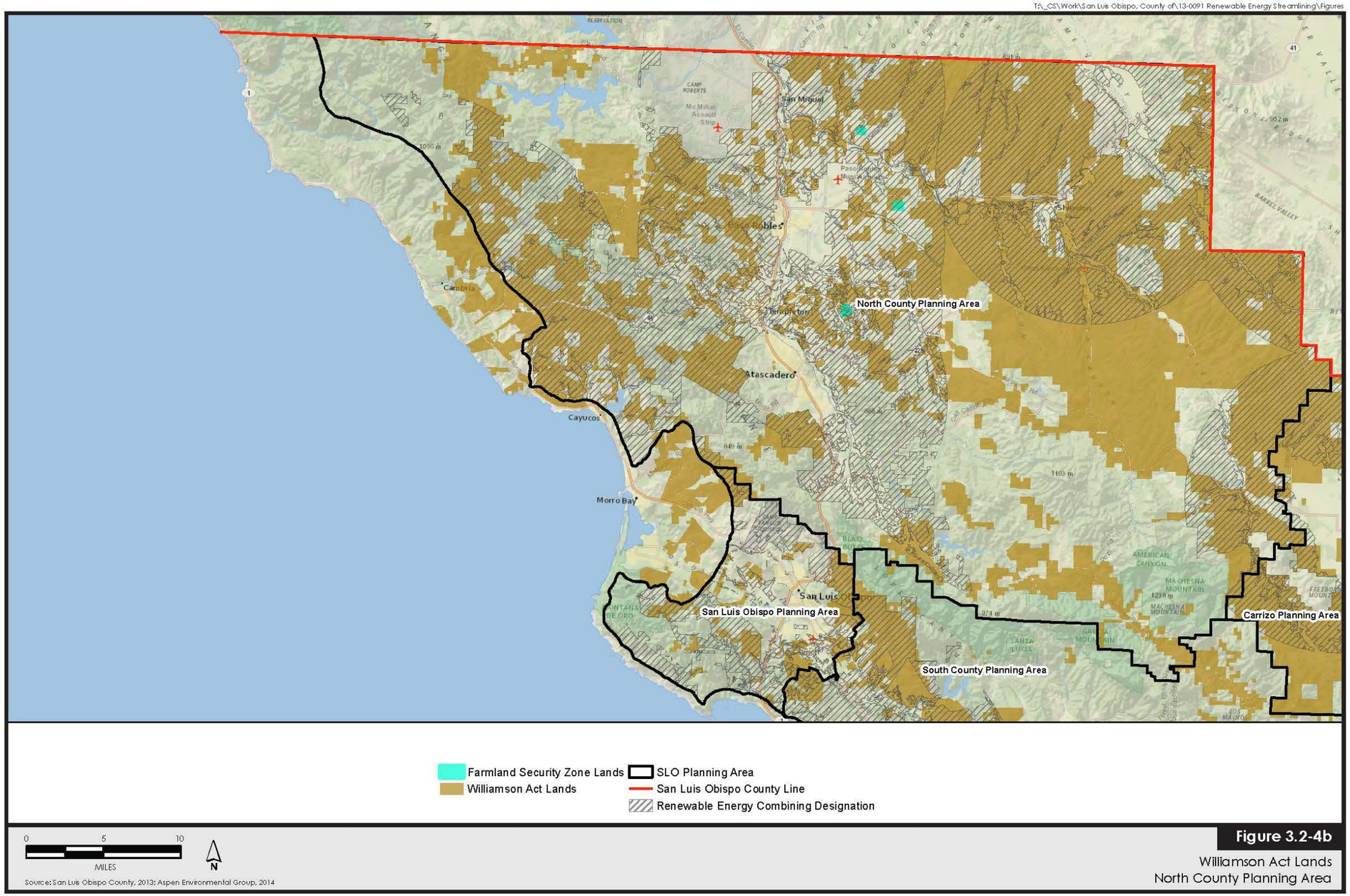

Figure 3.2-4b
Williamson Act Lands
North County Planning Area

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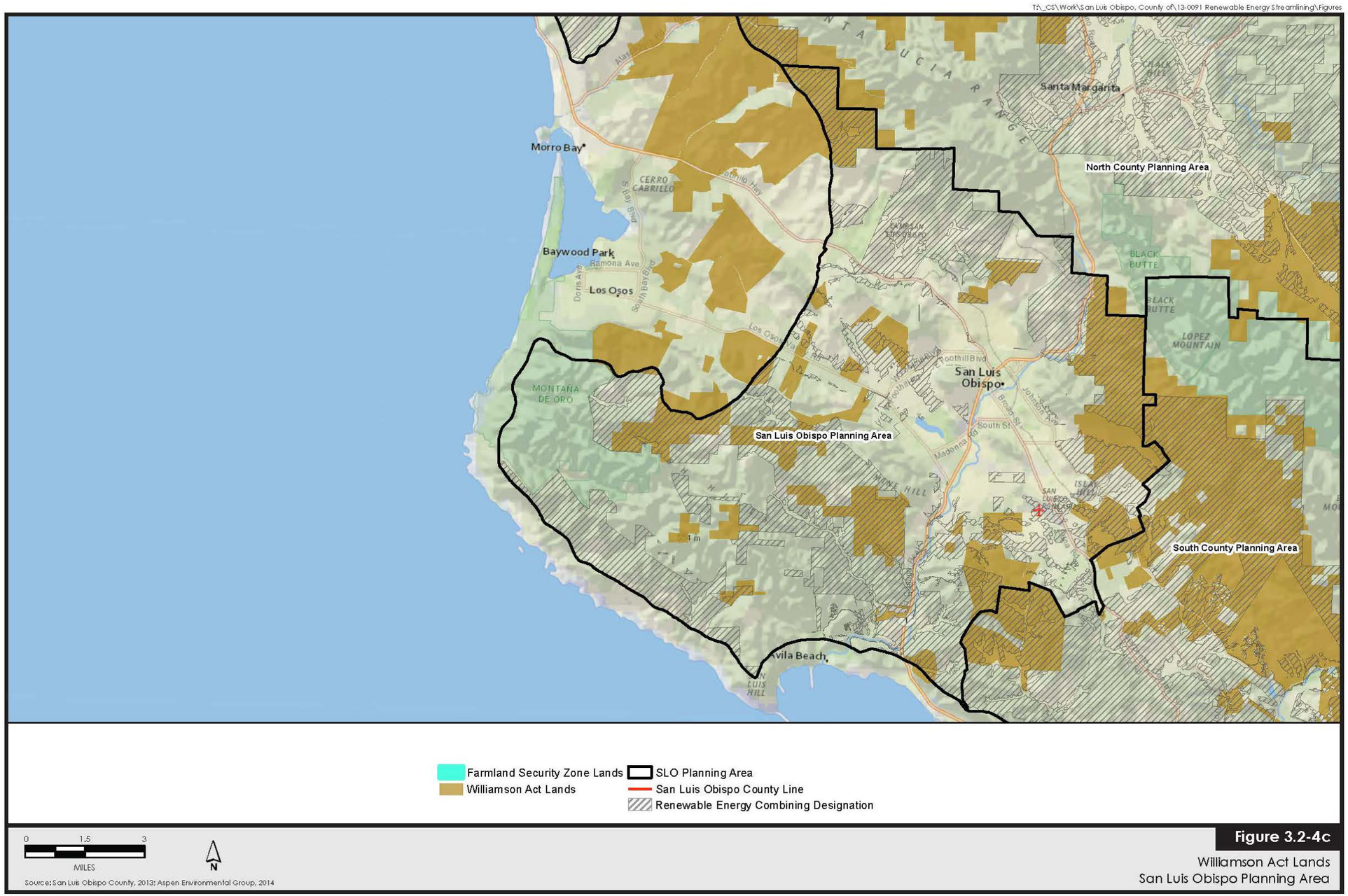

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Williamson Act Lands
San Luis Obispo Planning Area

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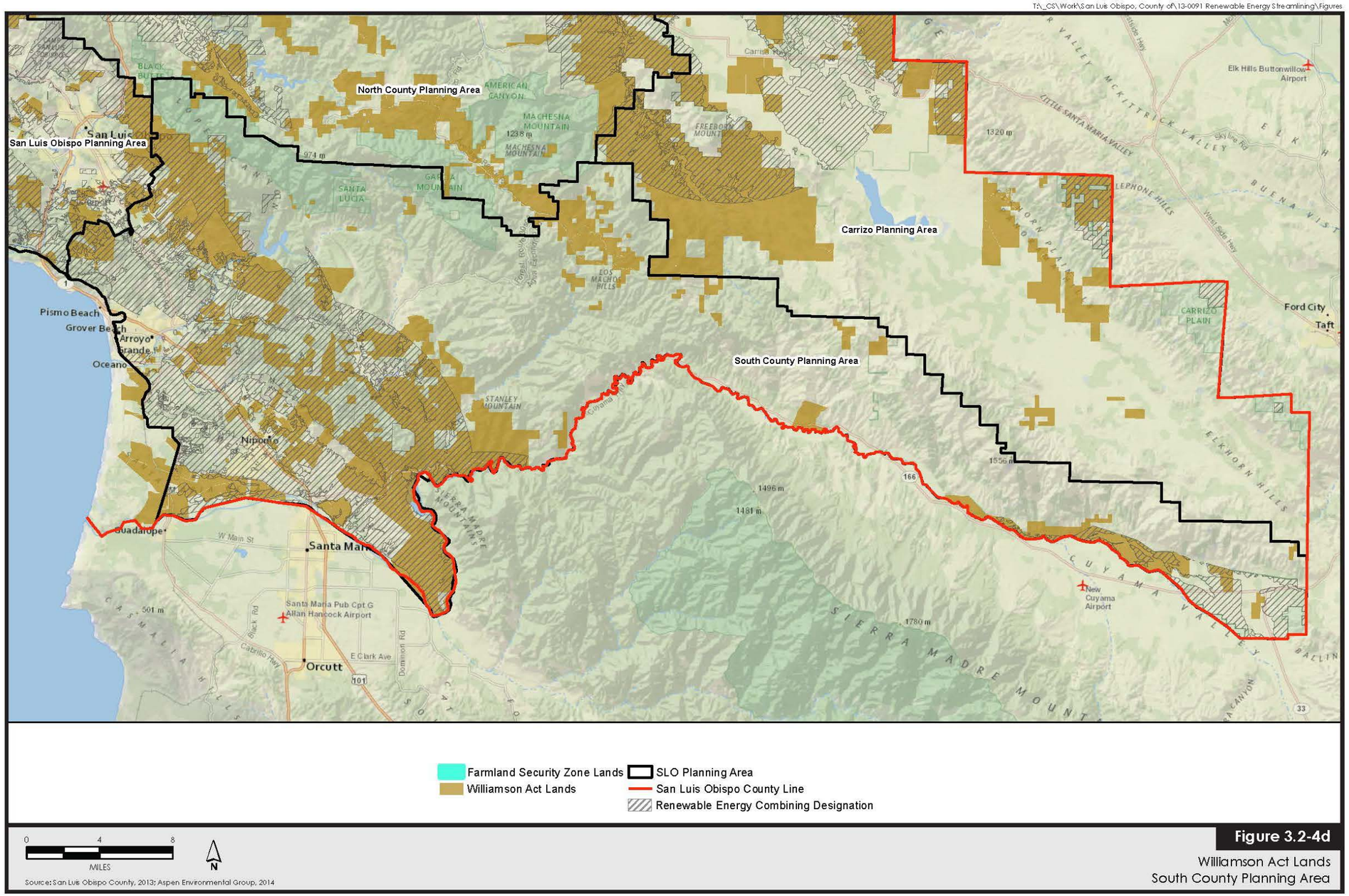

Figure 3.2-4d
Williamson Act Lands
South County Planning Area

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North County Planning Area

The North County Planning Area contains 737,944 acres of County-designated agricultural land, including 313,077 acres of Important Agricultural Soils and 490,319 acres enrolled in Williamson Act contracts. Agriculture has traditionally been and remains the principal industry in the North County Planning Area. Within urban areas, new development is increasingly oriented to commuter and retirement living, light industry, service businesses, and tourism. The planning area's deepest soils occur in older alluvial plains and existing floodplains. The highest quality agricultural soils exist in these areas (SLO County 2014a). The seven sub-areas in the North County Planning Area are described in more detail below.

Adelaida Sub-Area. Agriculture is the dominant land use in the Adelaida Sub-Area. The area contains relatively large parcels, large areas of land under Williamson Act contracts, and good soils, all of which reinforce widespread agricultural use. Almost the entire northern half of the sub-area, except Camp Roberts, is covered by Williamson Act contracts. Agricultural uses in the area include grazing, dry farming, orchards, vineyards, and such specialties as wineries and horse breeding. The area along the eastern slopes of the Santa Lucia Range is primarily rangeland, while farmlands in the north and east support extensive dry farm, orchard, and vineyard operations (SLO County 2014a).

El Polmar-Estrella Sub-Area. Historically, agriculture has been a primary land use in the El Pomar-Estrella Sub-Area. The El Pomar and Estrella agricultural preserves encompass much of the area. Of the 24,690 acres in the sub-area listed by the County Agricultural Commissioner's Office as producing some agricultural commodity in 2001, the largest segment by far (11,808 acres, or 48 percent) was devoted to cultivation of wine grapes. Hay was the next largest crop (2,665 acres). The average size of agricultural parcels north of State Route (SR) 46 is about 80 acres. South of SR 46, large agricultural holdings are interspersed between older subdivisions. The area near Paso Robles and the airport is experiencing intensification of agricultural uses, in particular vineyards (SLO County 2014a).

Las Pilitas Sub-Area. Some of the best quality soils in the Las Pilitas Sub-Area are found in the Santa Margarita Rancho lands in the southwest portion of the Las Pilitas Sub-Area along Pozo Road, much of which is an agricultural preserve. Substantial areas under Williamson Act contracts are used for dry farming, as in the Santa Margarita Rancho area, or for grazing, as in the area around Pozo. There are also existing agricultural operations found in the La Panza Road area north of Pozo, including a large turkey ranch. Agriculture designated lands are primarily in large ownership and must rely on locally available water resources for continued agricultural operations (SLO County 2014a).

Los Padres North Sub-Area. Agricultural lands in the Los Padres North Sub-Area are privately held and enrolled in Williamson Act contracts. These are mainly large cattle ranches with occasional residences or outbuildings. Limited dry farming exists where soil and terrain permit. Many ranches have obtained special Forest Service use permits allowing cattle grazing allotments on National Forest lands. These permits are reviewed periodically to ensure use of recommended range and grazing practices. Some ranches also control private access roads into portions of the Los Padres National Forest (SLO County 2014a).

Nacimiento Sub-Area. The majority of the Nacimiento Sub-Area along the western slopes of the Santa Lucia Mountains is designated by the County as Agriculture. The primary agricultural uses in the sub-area are grazing and dry farming. Most properties are in large holdings except in the area east of Bee Rock Road where smaller parcels of 40 acres are common. The agricultural practices in the sub-area require large acreages to be financially feasible (SLO County 2014a).

Salinas River Sub-Area. While this sub-area contains most of the urbanized areas in northern San Luis Obispo County, agriculture is still widespread in the Salinas River Sub-Area. Most agricultural uses adjacent to the Salinas River are particularly dependent on well irrigation water. Agriculture covers approximately 50,000 acres of the Salinas River Sub-Area, primarily in cattle grazing and dry farming. Irrigated agriculture covers only 3,800 acres; these irrigated soils support a variety of crops, including alfalfa, vineyards, orchards, pasture, and vegetables (SLO County 2014a).

Shandon-Carrizo North Sub-Area. Agriculture has been and still is the primary use of land in the Shandon-Carrizo Sub-Area; agriculture covers approximately 90 percent of the sub-area. The Estrella River Valley, the San Juan Creek Valley, and the area around Shandon Valley are generally used most intensively because of better soils and water availability. Irrigated production has increased during the last 10 years, particularly in vineyards and alfalfa. Dry farming and grazing operations encompass the rest of the agricultural uses. Much of the sub-area is in the agricultural preserve program, with parcel sizes ranging from 40 to 640 acres depending on production capability. Continued agricultural production is encouraged adjacent to the Shandon Urban Area. The soil capability of this area is Prime Farmland if irrigated, and most parcel sizes are sufficiently large to maintain a viable production (SLO County 2014a).

San Luis Obispo Planning Area

The San Luis Obispo Planning Area contains 43,236 acres of County-designated agricultural land, including 24,921 acres of Important Agricultural Soils and 16,234 acres enrolled in Williamson Act contracts.

San Luis Obispo North Sub-Area. The geology, topography, and drainage patterns within the San Luis Obispo North Sub-Area have helped define the soils found here. In the valley bottoms, there are alluvial soil groups, dominated by the Cropley-Salinas soils in the Edna area and Salinas-Marimel soils around San Luis Obispo Creek. These soils are very deep, nearly level to moderately sloping, and mostly well-drained. The surface layer ranges from sandy loam to clay. The Cropley-Salinas soils are well suited for dryland farming and irrigated pasture, while the Salinas-Marimel soils are well suited for irrigated row crops. The Salinas and Marimel soils are well suited for wildlife habitat development. The major soil groups found in the hills and mountains include the Los Osos-Lodo-Diablo soils, Santa Lucia-Lopez-Rock outcrop soils, Nacimiento-Calodo soils, and Rock outcrop-Obispo-Henneke soils. These soils are shallow to deep, moderately sloping to extremely steep and generally well drained. The surface layer ranges from loam to clay. These soils are used mainly as rangeland, with limited areas suited for dryland farming (SLO County 2014a).

South County Planning Area

The South County Planning Area contains 228,301 acres of County-designated agricultural land, including 68,246 acres of Important Agricultural Soils and 109,262 acres enrolled in Williamson Act contracts.

Huasna-Lopez Sub-Area. Agriculture is the principal land use in this sub-area, ranging from small irrigated farms to large cattle ranches. Valley lowlands, particularly in the Huasna drainage area, have soils and climate conducive to more intensive farm uses. Limited hilly areas with moderate slopes have the potential for tree and vine crops. A substantial portion of the sub-area consists of mountainous land with chaparral and oak woodlands, suitable only for limited grazing. About half the sub-area is enrolled in Williamson Act contracts (SLO County 2014a).

Los Padres South Sub-Area. Agricultural lands in the Los Padres South Sub-Area are privately held and enrolled in Williamson Act contracts. These are mainly large cattle ranches with occasional residences or outbuildings. Limited dry farming exists where soil and terrain permit. Many ranches have obtained special Forest Service use permits allowing cattle grazing allotments on national forest lands. These permits are reviewed periodically to ensure use of recommended range and grazing practices (SLO County 2014a).

San Luis Obispo South Sub-Area.. In the valley bottoms, alluvial soil groups typically are found, dominated by Cropley-Salinas soils in the Edna area and Salinas-Marimel soils around San Luis Obispo Creek. These soils are very deep, nearly level to moderately sloping, and mostly well drained. The surface layer ranges from sandy loam to clay. The Cropley-Salinas soils are well suited for dryland farming and irrigated pasture, while the Salinas-Marimel soils are well suited for irrigated row crops. The major soil groups found in the hills and mountains include Los Osos-Lodo-Diablo soils, Santa Lucia-Lopez-Rock outcrop soils, Nacimiento-Calodo soils, and Rock Outcrop-Obispo-Henneke soils. These soils are shallow to deep, moderately sloping to extremely steep, and generally well drained. The surface layer ranges from loam to clay. These soils are used mainly as rangeland, with limited areas suited for dryland farming. There are a wide variety of agricultural activities in the San Luis Obispo South Sub-Area. In the Edna Valley, recent expansion of intensive agricultural uses includes citrus and avocado groves and grape vineyards (SLO County 2014a).

San Luis Bay Inland (South) Sub-Area. Agriculture covers a substantial portion of this sub-area. Much of the agricultural land in this sub-area is enrolled in Williamson Act contracts, and rangeland dominates the Irish Hills and Indian Knob areas. There are relatively rich farmlands in the Cienega and Arroyo Grande valleys. The parcel sizes are generally large and lands are intensively used for raising crops. There are very few residences in the Cienega Valley; farmlands depend on the locally available groundwater (SLO County 2014a).

Shandon-Carrizo South Sub-Area. Most of this sub-area uses little water in dry farm and grazing operations, but the bottomland acreages suitable for irrigated crops are constrained by available water supplies. Consequently, the estimated safe annual yield of the underlying basins might be insufficient to irrigate all lands of otherwise suitable topography and soil (SLO County 2014a).

3.2.2 REGULATORY SETTING

STATE

California Department of Conservation

The Department of Conservation (DOC) administers and supports a number of programs, including the Williamson Act, the California Farmland Conservancy Program, the Williamson Act Easement Exchange Program, and the Farmland Mapping and Monitoring Program. These programs are designed to preserve agricultural land and provide data on conversion of agricultural land to urban use. The Department of Conservation is responsible for approving Williamson Act Easement Exchange Program agreements.

Important Farmland Inventory System and Farmland Mapping and Monitoring Program

The USDA Natural Resources Conservation Service (NRCS, previously known as the Soil Conservation Service) initiated the Important Farmland Inventory System in 1975. This system classifies land based on ten soil and climatic characteristics. The State of California developed a

system based on this federal system, with the California Department of Conservation's development of a mapping and monitoring program for California in 1980, known as the Farmland Mapping and Monitoring Program (FMMP).

Under Appendix G of the California Environmental Quality Act (CEQA), the checklist references the FMMP to help evaluate agricultural resources in environmental assessments. The state's system was designed to document how much agricultural land in California was being converted to nonagricultural land or transferred into Williamson Act contracts. The definitions of Important Farmland types are provided in the Farmland Mapping and Monitoring Program discussion in Subsection 3.2.1, Physical Setting, above.

Williamson Act

As described above, the Williamson Act is a voluntary state program administered by counties and cities to preserve agricultural land and discourage the premature conversion of agricultural land to urban uses. The act authorizes local governments and property owners to (voluntarily) enter into contracts to commit agricultural land to specified uses for 10 or more years. Once restricted, the land is valued for taxation based on its agricultural income rather than unrestricted market value, resulting in a lower tax rate for owners. In return, the owners guarantee that these properties remain under agricultural production for an initial 10-year period. Termination of a Williamson Act contract through the nonrenewal process is the preferred method to remove the enforceable restriction of the contract. Cancellation is another method to remove this restriction but is usually reserved for unusual "emergency" situations. In order to approve cancellation, a board or council must make specific findings based on substantial evidence that a cancellation is consistent with the purposes of the act or in the public interest.

Farmland Security Zones

Farmland Security Zones (FSZs) are meant to protect participating Important Farmland from development pressure. An FSZ must be located within an agricultural preserve (area designated as eligible for a Williamson Act contract) and designated as Prime Farmland, Farmland of Statewide Importance, Unique Farmland, or Farmland of Local Importance. The agricultural and open space lands enrolled in the program are protected for a minimum of a 20-year term under an FSZ and are offered an even greater property tax reduction than land under a Williamson Act contract.

LOCAL

San Luis Obispo County General Plan – Agriculture Element

The Agriculture Element (2010) of the General Plan focuses on the management and protection of agriculture. Policies seek to balance the need for other environmental resources while protecting agriculture. The element commits to buffer and protect agricultural land from conversion to nonagricultural uses. Sites with the Agriculture land use designation and other lands in production agriculture are subject to policies that guide the location of new structures and facilities to protect agriculture. Policies create agriculture clusters, which are implemented through standards in the Land Use Ordinance. The element's Appendix D includes the County's Right to Farm Ordinance, which includes additional protection measures for existing agriculture (also codified under Title 5 of the County Code).

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

The Conservation and Open Space Element (2010) presents policies to protect agricultural soils from conversion to nonagricultural uses. This element also presents the map of Important Agricultural Soils protected by the County's soil and agricultural policies. Policies protect the County's Important Agricultural Soils, which account for both federal and state farmland classifications as described above.

San Luis Obispo County General Plan – Land Use and Circulation Element

The Land Use and Circulation Element (LUCE) establishes policies for address strategic growth and the preservation of agriculture. Policies also commit to maintain rural areas with agriculture or low-density uses.

San Luis Obispo County Land Use Ordinance – Title 22

The Land Use Ordinance (LUO) includes standards that apply to agricultural uses and land use designations. Site design standards establish maximum height and required setbacks for Agriculture land use designations. Chapter 22.30 establishes standards for specific agricultural uses, including agricultural accessory structures (Section 22.30.060), agricultural processing uses (Section 22.30.070), and crop production or grazing within urban or village areas (Section 22.30.200).

LUO – Planning and Permit Procedures

Article 6 of the LUO identifies permit requirements to document land use buffers for agriculture. Section 22.60.040 establishes that for all land use applications except zoning clearance for sites where there is an existing agricultural use taking place on adjacent parcels and a buffer is proposed, the buffer shall be identified and incorporated into project design.

San Luis Obispo County Williamson Act Rules and Procedures

The County of San Luis Obispo administers the Williamson Act program locally for the unincorporated county. The County's Williamson Act Rules and Procedures regulate allowable uses for lands under conservation contract. Standards in the rules and procedures restrict the use of land for agricultural and compatible uses. Table 2 does not allow electric-generating plants on contracted land, while public utility facilities are allowable. The definitions of both land uses are located in Chapter 22.80 of the Land Use Ordinance. Electric-generating plants typically involve large-scale plants whose purpose is to produce electricity. Public utility facilities involve the distribution of voltage, power lines and transformers being prime examples.

In the current rules and procedures, Williamson Act lands may withdraw from a Williamson Act contract by filing a notice of nonrenewal. This process can be initiated by either the contracting agency or the landowner. Under this process, the contract is ended after a nine-year nonrenewal period during which taxes gradually increase every year.

The California Land Conservation Act of 1965 and the California Department of Conservation strongly discourage the cancellation of Williamson Act contracts. Cancellation can be a lengthy process and is intended for only unusual circumstances. If a cancellation request is tentatively approved by the Board of Supervisors, the applicant must pay a cancellation penalty fee (collected by the County and transmitted to the State) amounting to 12.5 percent of the

appraised value of the property as if it were not subject to contract within one year after tentative approval of cancellation.

Public acquisition of Williamson Act contracted lands is only available to public agencies acquiring land through eminent domain or voluntary donation or sale by private landowners to a public agency (acquisition in lieu of eminent domain). The acquisition process requires notification, a referral package with a detailed project description, and findings from the Government Code. Although land can be removed from land conservation contract upon conveyance to a public agency without having to "run the contract term," this process is generally not available to private landowners or to developers of renewable energy projects.

San Luis Obispo County Right to Farm Ordinance – Title 5

San Luis Obispo County adopted a right-to-farm ordinance most recently updated in 2002 (Title 5 of the County Code; see also Appendix D of the County's Agricultural Element). The ordinance seeks to enhance and encourage agricultural operations while providing proper notification to residents regarding agricultural entities' right to farm. The ordinance requires disclosure to purchasers of residential property in the unincorporated area of the County's policy to protect agricultural operations. The ordinance establishes that no properly conducted agricultural operation that is operated consistent with accepted standards is to be considered a nuisance. Title 5 identifies the required contents for disclosure, including a summary of potential inconveniences or discomforts from agricultural operations, such as dust, pesticide use, and fertilizer use. Agricultural operations protected by the ordinance are those that are conducted for commercial purposes consistent with common practice and other criteria specified by the ordinance. Protected agricultural operations must also predate the affected use of the purchased property, have been in existence for more than three years, and have not been a nuisance at the time the agricultural operation began.

Summary of Local Regulations and Policies

Table 3.2-4 summarizes regulations and policies from the documents described above, including General Plan elements, County codes, and procedures for agriculture. Information is organized by planning area.

TABLE 3.2-4
LOCAL POLICIES AND CODES FOR AGRICULTURE ISSUES

Applicable Policy or Code Section	Summary
Countywide	
Agriculture Element, AGP10	Encourage water conservation through feasible and appropriate "best management practices." Emphasize efficient water application techniques; the use of properly designed irrigation systems; and the control of runoff from croplands, rangelands, and agricultural roads.
Agriculture Element, AGP8.a	Allow the development of compatible intensive agricultural facilities that support local agricultural production, processing, packing, and support industries.
Agriculture Element, AGP8.b	Locate new buildings, access roads, and structures so as to protect agricultural land.
Agriculture Element, Goal AG3.b	Maintain and protect agricultural lands from inappropriate conversion to nonagricultural uses.

Applicable Policy or Code Section	Summary
Agriculture Element, Policy AGP11.a	Maintain water resources for production agriculture, both in quality and quantity, so as to prevent the loss of agriculture due to competition for water with urban and suburban development.
Agriculture Element, Policy AGP11.b	Do not approve proposed General Plan amendments or rezonings that result in increased residential density or urban expansion if the subsequent development would adversely affect: (1) water supplies and quality, or (2) groundwater recharge capability needed for agricultural use.
Agriculture Element, Policy AGP12.b	Encourage the use of integrated pest management techniques to manage pests, vertebrates, and weeds on both public and private lands.
Agriculture Element, Policy AGP12.c	Support and promote programs that help landowners learn pest control methods, utilizing the expertise of the UC Cooperative Extension and the County Agriculture Department.
Agriculture Element, Policy AGP17	Protect land designated Agriculture and other lands in production agriculture by using natural or man-made buffers where adjacent to nonagricultural land uses using adopted agricultural buffer policies.
Agriculture Element, Policy AGP18	Locate new buildings, access roads, and structures so as to protect agricultural land.
Agriculture Element, Policy AGP24	Discourage the conversion of agricultural lands to nonagricultural uses.
Agriculture Element, Policy AGP24.a.4	Discourage the conversion of agricultural lands to nonagricultural uses by avoiding locating new public facilities outside urban and village reserve lines unless they serve a rural function or there is no feasible alternative location within the urban and village reserve lines.
Agriculture Element, Policy AGP25	For new development requiring a discretionary permit on AG land use designations or land used for production agriculture: Protect unique or sensitive habitat affected by the proposal through siting the proposed development so as to avoid significant impacts on the habitat or significant impacts on the agricultural operations.
Agriculture Element, Policy AGP27.a	Designation and management of a proposed Natural Area Preserve shall not interfere with agricultural uses on private lands that are either within or adjacent to the proposed preserve.
Agriculture Element, Policy AGP28.a	Designation and management of a Major Ecosystem shall not interfere with agricultural uses on private lands that are either within or adjacent to the Major Ecosystem.
Agriculture Element, Policy AGP29.a	Identification or designation of a wildlife corridor in accordance with the Biological Resources chapter of the Conservation and Open Space Element shall not interfere with agricultural uses on private lands.
Agriculture Element, Policy AGP30.b	In designated scenic corridors, new development requiring a discretionary permit shall address protection of scenic vistas by balancing the protection of scenic resources with protection of agricultural resources and facilities, siting structures, or grading to minimize visibility and compatibility with agricultural operations.
Agriculture Element, Policy SL 3.1	Conserve Important Agricultural Soils. Proposed conversion of agricultural lands to nonagricultural uses shall be evaluated against the applicable policies in the COSE and in the Agriculture Element.
Agriculture Element, Appendix D	Right to Farm Ordinance (codified under Title 5 of the County Code).
General Plan, Conservation and Open Space Element, Policy AG2.b	Conserve the soil and water that are the vital components necessary for a successful agricultural industry in this county.

Applicable Policy or Code Section	Summary
Land Use and Circulation Element, Part I, Framework for Planning, Strategic Growth Principle 1	Preserve open space, scenic natural beauty and sensitive environmental areas. Conserve energy resources. Conserve agricultural resources and protect agricultural land.
Land Use and Circulation Element, Part I, Framework for Planning, Strategic Growth Principle 1, Policy 6	Encourage the protection and use of agricultural land for the production of food, fiber and other agricultural commodities, and support the rural economy and locally based commercial agriculture.
Land Use and Circulation Element, Part I, Framework for Planning, Strategic Growth Principle 2, Policy 1	Maintain rural areas in agriculture, low-intensity recreation, very low-density residential uses, and open space uses that preserve and enhance a well-defined rural character.
Title 22, Section 22.60.040	All land uses except zoning clearance: Where there is an existing agricultural use taking place on adjacent parcels and the applicant proposes an agricultural buffer, the buffer shall be shown on site plan, and incorporated into the site design or the lot configuration of the proposed land division.
Title 5, Williamson Act Rules of Procedure, Table 2	Land under Williamson Act conservation contract: allowable uses limited to agriculture and compatible uses (Right to Farm Ordinance).
Carrizo Planning Area	
No additional policies or code specific to the Carrizo Planning Area.	
North County Planning Area	
Land Use and Circulation Element, Part II, North County Area Plan, Section III, 4.4, Policies	El Pomar-Estrella Sub-Area: Preserve agricultural operations by directing new development toward existing communities and subdivisions and away from agricultural uses, requiring new development to mitigate its impacts on existing agricultural operations, and supporting and maintaining the County Right-to-Farm Ordinance.
Land Use and Circulation Element, Part II, North County Area Plan, Section III, 4.4, Policies	El Pomar-Estrella Sub-Area: Protect the area near Paso Robles and the airport for agricultural use, and avoid any land use category changes that would diminish its agricultural potential and introduce nonagricultural uses in the area.
LUCE, Part III, Shandon Community Plan, Appendix D EIR Mitigation Measures, AG-1 (b)	Agriculture (AG) land use designations, Shandon Community Plan area: Applicants for projects on prime agricultural lands shall provide easements to conserve ag land at a ratio of 1:1 for direct impacts and 0.5:1 for indirect impacts, with funds to compensate for administrative costs incurred by easement holder.
Title 22, Article 9, 22.94.042.A	Agriculture (AG) land use designation, El Pomar-Estrella area: New development subject to discretionary review shall be set back a minimum of 50 feet from the top of the bank of any watercourse or outside the dripline of riparian vegetation, whichever distance is greater.
Title 22, Article 9, 22.94.080.C-F	Salinas River Sub-Area: All new development shall seek to preserve open space, the Salina River floodplain integrity, prime agricultural soils, and other land of agricultural value.
San Luis Obispo Planning Area	
Title 22, Article 9, 22.96.040.D	Production agricultural areas. New development shall place buildings to minimize the loss of existing and potential production agricultural areas including prime soils and other areas capable of agricultural production which primarily consist of Class III and IV soils, but may also include productive areas with Class VI soils.
South County Planning Area	
No additional policies or code specific to the South County Area.	

3.2.3 IMPACTS AND MITIGATION MEASURES

THRESHOLDS OF SIGNIFICANCE

According to Appendix G of the CEQA Guidelines and the County's Environmental Checklist, a project will normally have a significant effect on agricultural resources if it will:

1) Convert prime agricultural land to a nonagricultural use. [This includes the conversion of Important Farmland as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program (FMMP) of the California Resources Agency or the conversion of lands identified as Important Agricultural Soils of San Luis Obispo County.]

2) Conflict with existing zoning for agricultural use, or a Williamson Act contract.

3) Involve other changes in the existing environment, which due to their location or nature, could impair agricultural uses of other properties or could result in conversion of farmland to nonagricultural use.

Therefore, for the purposes of this project, any project activity resulting in an impedance of agricultural activities or potentially resulting in a substantial loss of agricultural productivity will be considered a potentially significant impact.

PROJECT IMPACTS AND MITIGATION MEASURES

Convert Important Agricultural Soils to Nonagricultural Use (Threshold 1)

Assessing impacts to agricultural resources involves examining both the environmental characteristics of those resources and their current and historic use. The strictly environmental components of agricultural resources include physical characteristics such as soil quality, as well as water quality and availability. The current and historic use of agricultural resources on a project site involves the interaction of these environmental characteristics with economic factors. The County defines Important Agricultural Soils in its COSE as described in Subsection 3.2.1, Physical Setting, above. Conversion of land that is used to grow high-value crops would have greater economic effects than conversion of land that is used for lower value crops or grazing, particularly because cultivation of higher-value crops tends to be more labor-intensive. However, this analysis is largely based on the quality of agricultural soils because CEQA generally focuses on physical, rather than economic, impacts.

The Renewable Energy (RE) Combining Designation allows renewable energy development on some agricultural land, but not on any designated Important Agricultural Soils except for Important Rangeland Soils.

Ground-mounted renewable energy systems and facilities may require grading and/or vegetation removal during construction and installation, which may affect agricultural land through increased erosion and loss of soil. Typical impacts on agricultural land include damage to crops and livestock from increased traffic on farm roads; competition for water resources, including groundwater; water and soil contamination; suppression of plant growth by fugitive dust; soil erosion; the spread of weeds; and shading of crops.

Solar electric facility (SEF) and wind energy conversion system (WECS) projects installed on rooftops and other structures would require very limited ground disturbance, if any.

Impact 3-2-1 – Solar Implementation of the proposed Program could convert Important Agricultural Soils to nonagricultural use. This impact is considered **significant, unavoidable, and adverse (Class I).**

The proposed project could lead to development of 150 megawatts (MW) of renewable energy and affect up to 1,500 acres of Important Agricultural Soils, representing approximately 0.20 percent of all Important Agricultural Soils in the county (see **Table 3.2-2**). The combining designation is approximately 801,910 acres in size with approximately 318,340 acres of Important Agricultural Soils. If the estimated 1,500 acres of project were to occur solely within the combining designation, it represents 0.47 percent of the Important Agricultural Soils as shown in **Table 3.2-2**.

The proposed Program could indirectly result in the conversion of agricultural land to nonagricultural uses. **Table 3.2-4** and **Table 3.2-5** lists the project categories and corresponding review level both within (Table 3.2-4) and outside (Table 3.2-5) of the RE Combining Designation. This EIR focuses on project categories that would be approved with either a zoning clearance or site plan review, as other project types would be subject to discretionary review and CEQA compliance, similar to existing practices.

TABLE 3.2-5
APPROVAL LEVEL AND REQUIREMENTS WITHIN THE COMBINING DESIGNATION

Tier	Approval	Requirements
Tier 1 SEF roof- or structure-mounted	Zoning Clearance	• Located on the roof or structure of a conforming use.
Tier 1 SEF ground-mounted, 20 acres or less, and not on Class I or II soils	Site Plan Review	• Located on land that is graded, disturbed, or altered; or • Located on land that was previously developed for industrial or commercial purposes and degraded or contaminated and then abandoned or underused.
Tier 1 WECS roof- or structure-mounted where allowable	Zoning Clearance	
Tier 2 SEF 40 acres or less	Site Plan	• Proposed on a parcel with land use category other than Open Space (OS) or Recreation (REC); and • Is not subject to any environmentally related permits; and • In the Agriculture (AG) land use category, is not sited on any type of Important Agricultural Soils as defined in the Conservation and Open Space Element, unless sited on Important Agricultural Soils designated as Highly Productive Rangeland.
Tier 3 SEF 160 acres or less	Site Plan	• Proposed on a parcel included in the Commercial Service (CS), Industrial (IND), or Agriculture (AG) land use categories (vacant or non-vacant). • Is not subject to any environmentally related permits. • In the Agriculture land use category, is not sited on any type of Important Agricultural Soils as defined in the Conservation and Open Space Element, unless sited on Important Agricultural Soils designated as Highly Productive Rangeland Soils.

TABLE 3.2-6
APPROVAL LEVEL AND REQUIREMENTS OUTSIDE OF THE COMBINING DESIGNATION

Permit Type	Tier	Requirements Outside of the Combining Designation
Zoning Clearance	Tier 1 roof- or structure-mounted	• Located on the roof or structure of a conforming use.
Zoning Clearance	Tier 1 WECS roof- or structure-mounted where allowable	
Minor Use Permit	Tier 2 SEF 40 acres or less	• Is not located on Class I or Class II soils, • Is ground-mounted, and • Is located in urban areas, or located in rural areas on sites designated as Commercial, Service (CS) or Industrial (IND).. • CEQA analysis required of this discretionary permit.
Minor Use Permit	Tier 2 WECS ground-mounted	• Up to 100 feet tall; and • No more than rated capacity of 2 MW for all turbines. • CEQA analysis required of this discretionary permit.
Conditional Use Permit	Tier 3 SEF 160 acres or less	• CEQA analysis required of this discretionary permit.
Conditional Use Permit	Tier 4 SEF 160+ acres	• CEQA analysis required of this discretionary permit.
Conditional Use Permit	Tier 3 WECS ground-mounted	• CEQA analysis required of this discretionary permit.

As shown in the above tables and codified in section 22.32.050.A of the proposed performance standards, Tier 1 ground-mounted SEFs could be allowed on previously disturbed land with ministerial approvals. As disturbed soils can also be Important Agricultural Soils, it is possible that Tier 1 projects will convert Important Agricultural Soils to nonagricultural uses. For Tier 2 SEF ground-mounted projects, the proposed performance standards require avoiding Class I and Class II Soils. Additionally, proposed performance standard section 22.32.050.D.9 requires agricultural easements to offset the conversion of Important Agricultural Soils for Tier 2 and above projects outside of the combining designation. Proposed performance standards in 22.14.100.E.2-3 for Tier 2 and Tier 3 SEF ground-mounted projects in the combining designation require avoiding Important Agricultural Soils, unless sited on Highly Productive Rangeland Soils. Agricultural easements proposed in 22.14.100.F.9 would further require agricultural easements to offset the conversion of Highly Productive Rangeland Soils and agricultural uses.

While this conservation easement measure could be similarly applied to Tier 1 ground-mounted SEFs proposed on Important Agricultural Soils, such mitigation would run counter to the primary objectives of the Program. The County is seeking to encourage development of these smaller scale (20 acres *or less*) Tier 1 SEFs by removing barriers to approval. Requiring conservation easements for SEFs that are 20 acres or less in size would place additional financial and legal burden on agricultural land owners, essentially discouraging applications and defeating streamlining efforts. Therefore, this measure was rejected as a performance standard for Tier 1 SEFs, and as a result this impact is considered **significant, unavoidable, and adverse (Class I)**.

Impact 3-2-1 – Wind

Implementation of the proposed Program could convert Important Agricultural Soils to nonagricultural use. This impact would be **less than significant (Class III)**.

Tier 1 WECS must be roof or structure-mounted and would not convert Important Agricultural Soils to nonagricultural use. Therefore, this impact would **less than significant (Class III)**.

Tier 2 WECS projects are subject to the same ground disturbance provisions as Tier 2 SEF projects as discussed in Impact 3-2-1 Solar above; however, impacts are likely to be less than for SEF projects. Wind turbines typically occupy a much smaller footprint on the ground than a similarly sized SEF project and can be located so as to minimize impacts to Important Agricultural Soils.

Also, other than the actual footprint of the tower, it is possible to continue farming around the WECS equipment. Tier 2 WECS projects are also subject to discretionary approval through a Minor or Conditional Use Permit (see **Table 3.2-5**); site-specific provisions regarding conversion of Important Agricultural Soils may apply. As WECS projects occupy much less land area than a similarly sized SEF project, can be located so as to avoid Important Agricultural Soils, and can allow farming around the installation, this impact is considered **less than significant (Class III)**.

Impact 3-2-1 – Policy Changes Implementation of the proposed Program could result in changes to countywide policies that could indirectly result in the conversion of Important Agricultural Soils to nonagricultural use. This impact is considered **significant, unavoidable, and adverse (Class I).**

The proposed policy would streamline the installation of renewable energy projects in the combining designation and for Tier 1 projects in other areas of the county. The policy changes include modifications that are mainly focused on changes to the Land Use Ordinance (LUO) to explain and permit the streamlining. Recommended performance standards are included in Section LUO 22.14; however, the policy changes also modify the COSE to help define the type and scale of energy generation facilities, the LUCE to create a renewable energy area and support streamlining, and modifications to the Rules of Procedure (RoP) for implementation of the California Land Conservation Act. These policy changes resulted in the proposed modifications to the LUO discussed in this EIR.

The proposed changes to County policies would streamline approval of renewable energy solar electric and wind powered facilities that could result in the conversion of up to 1,500 acres of Important Agricultural Soils to nonagricultural use for an extended period (25+ years). The proposed LUO requires that projects comply with performance standards designed to address environmental impacts, including impacts to agricultural resources.

For Tier 2 and above projects, either the provision of the proposed performance standards requiring an easement or the avoidance of Important Agricultural Soils, or the resulting conditions placed on a project through specific evaluation associated with the Minor or Conditional Use Permit will reduce impacts to less than significant levels. However, as discussed in Impact 3-2-1 Solar, not all of the proposed performance standards are appropriate for all projects. Tier 1 SEF projects may result in the conversion of Important Agricultural Soils to nonagricultural uses, as application of an agricultural easement is not considered appropriate or feasible for these smaller scale projects. Therefore, the impact is considered **significant, unavoidable, and adverse (Class I).**

Conflict with Existing Zoning for Agricultural Use, or Williamson Act Program (Threshold 2)

Impact 3-2-2 – Solar Implementation of the proposed Program could conflict with existing zoning for agricultural use or with the Williamson Act program. This impact is considered **less than significant (Class III).**

Renewable energy projects have significant siting constraints because they must locate close to substations with the capacity to accept additional electrical generation and be close to appropriately sized electric distribution lines. Otherwise, the cost of the infrastructure to feed electricity into the grid is prohibitive and projects are infeasible. Much of the land in close proximity to these substations is zoned for agriculture and much of that land is under Williamson Act contract.

As proposed in the Williamson Act Rules of Procedure (RoP), Tier 1 and Tier 2 SEF projects within the RE Combining Designation can be located on active Williamson Act lands provided the energy production is an accessory use to the primary agricultural use. Roof-mounted solar has no impact on an agricultural use. Ground-mounted Tier 2 and 3 SEF projects would not eligible for streamlining if proposed on Important Agricultural Soils (with the exception of an allowance on Highly Productive Rangelands, provided conservation easement requirements are met per proposed standards 22.14.100E and F). As these provisions of the proposed Program would protect Important Agricultural Soils and ensure that agricultural will continue, the impacts are considered **less than significant (Class III).**

For Tier 2 and above projects outside of the combining designation, the existence of a Williamson Act contract will need to be considered as part of the Minor or Conditional Use Permit and the associated environmental determination. The provisions of the RoP are intended to preserve the Williamson Act contracts. As proposed, the project will not result in the cancellation of Williamson Act contracts. This impact would be considered **less than significant. (Class III).**

Impact 3-2-2 – Wind Implementation of the proposed Program could conflict with existing zoning for agricultural use or with the Williamson Act program. This impact is considered **less than significant (Class III)**.

Tier 1 WECS will be roof-mounted and will not interfere with any Williamson Act contract. Similar to SEF projects, Tier 2 and above WECS projects will be subject to the proposed RoP requirements that limit the location of the equipment and the extent of Williamson Act land that can be affected. Compliance with the RoP ensures that the proposed Program will not result in the cancellation of a Williamson Act contract. Therefore, this impact would **less than significant (Class III)**.

Impact 3-2-2 – Policy Changes Implementation of the proposed Program could result in changes to countywide policies that could conflict with existing zoning for agricultural use or with the Williamson Act program. This impact would be **less than significant (Class III)**.

The proposed Program would not result in changes to the Williamson Act program that would allow cancellation or early termination. The proposed RoP establishes criteria for the siting of equipment as well as property size restrictions that ensure the agricultural use of the property remains primary and consistent with the goals of the Williamson Act program. There are no

provisions of the proposed RoP amendments or the other policy, code, and text amendments included in this project that would conflict with existing zoning or with the Williamson Act program. Therefore, this impact is considered **less than significant (Class III)**.

Impair Agricultural Use of Other Property or Result in Conversion to Other Uses (Threshold 3)

Impact 3-2-3 – Solar Implementation of the proposed Program could impair agricultural use of other property or result in conversion to other uses. This impact is considered **less than significant (Class III)**.

In addition to direct impacts associated with construction on Important Agricultural Soils, operation of SEF projects could result in weeds, invasive species, and dust that may affect the agricultural use on adjacent lands. Typical SEF projects result in at least some ground clearing to allow access and installation of ground-mounted equipment. The vegetation under and around the units must also be managed to reduce fire danger and avoid interference with the SEF units. In some instances, the ground under the units may be kept nearly vegetation free to aid in maintenance, in which case soil stabilizers are typically used to prevent dust since dust diminishes the performance of PV panels. In either a vegetated or cleared state, soil (dust) blowing onto adjacent agricultural properties during operation of an SEF would not be of a frequency or degree that would be expected to result in impairment or conversion of the agricultural use.

Proposed performance standard 22.32.040.C.4 addresses the potential spread of weeds by requiring preparation of an Integrated Pest Management Plan for ground-mounted renewable energy-generating facilities. The plan would typically include a listing of plantings, herbicides used, and the frequency of use. Implementation of the proposed standards would reduce impacts related to operation of ground facilities to **less than significant (Class III).**

Impact 3-2-3 – Wind Implementation of the proposed Program could impair agricultural use of other property or result in conversion to other uses. This impact would **less than significant (Class III)**.

Tier 1 WECS would be roof or structure-mounted and will not impair the agricultural use of property or result in conversion of an agricultural use to a nonagricultural use. Tier 2 WECS projects are subject to the same requirements of proposed performance standard 22.32.040.C.4 and existing County regulations as SEFs. There are no operational characteristics that would otherwise be expected to result in the impairment or conversion of adjacent agricultural uses. Therefore, this impact would be **less than significant (Class III).**

Impact 3-2-3 – Policy Changes Implementation of the proposed Program could result in changes to countywide policies that could impair agricultural use of other property or result in conversion to other uses. This impact is considered **less than significant (Class III).**

Changes to County policies that would streamline development of renewable energy facilities could lead to the conversion of agricultural land to nonagricultural use and potentially significant impacts to surrounding farmland, if no provisions are included to address this issue. The proposed Program includes setbacks for equipment that could pose a hazard to crop dusting aircraft, as well as maintenance plans to ensure that invasive weeds do not affect adjacent agricultural uses. There are no policy changes that would otherwise be expected to result in the impairment or conversion of adjacent agricultural uses. Therefore, this impact would be **less than significant (Class III).**

CUMULATIVE IMPACTS

As envisioned, the proposed Program is anticipated to facilitate development of up to 150 MW of renewable energy projects, which could cover up to 1,500 acres. The streamlining aspects of the project are focused on lands within the combining designation; however, Tier 1 projects could be located anywhere in the county. As shown in **Table 3-2-2**, the county has approximately 750,384 acres of Important Agricultural Soils. If all 1,500 acres were located on Important Agricultural Soils, approximately 0.20 percent of the county's Important Agricultural Soils would be converted to nonagricultural use. This figure does not represent a cumulatively considerable percentage of total agricultural land in the county. Moreover, as noted in this EIR section, it is unlikely that 1,500 acres of Important Agricultural Soils would be converted, as provisions of the program are specifically designed to direct SEF and WECS elements away from Important Agricultural Soils. Further, Tier 2 WECS facilities may also allow agricultural use to continue after installation.

The California Department of Conservation Division of Land Resource Protection oversees the Farmland Mapping and Monitoring Program (FMMP). According to the latest report from the FMMP, approximately 17,538 acres of Important Farmland and Grazing Land was converted to non agricultural use between 2008 and 2010 in the county (DOC 2014c). If all 1,500 acres of the proposed Program were located on Important Farmland, this would represent an 8.55 percent increase in conversion over the 2008–2010 time period. As noted above, this figure represents the most conservative impact potential, as provisions of the program, the RoP, and the County General Plan discourage or prohibit the conversion of agricultural land to nonagricultural resources.

The proposed Program includes Tier 1 projects that specifically avoid Important Agricultural Soils by being located on rooftops or on previously disturbed soil. While Impact 3-2-1 - Solar concludes that some Important Agricultural Soils may be converted, the Class I impact determination is as a result of an abundance of caution in this EIR, rather than an expectation of substantial conversions of agricultural land to nonagricultural uses.

Tier 2 and above projects outside of the combining designation will require either a Minor or Conditional Use Permit that are discretionary and will be accompanied by project-specific environmental analysis. This process will establish conditions of approval and project-specific mitigation measures. None of the provisions of the proposed Program are intended to result in the conversion of Important Agricultural Soils to nonagricultural use. Tier 2 and above projects outside of the combining designation are not streamlined as part of the proposed Program and must therefore address any agricultural land conversion independently, which represents no change from existing conditions.

While the proposed Program could result in the conversion of 1,500 acres of land converting Important Agricultural Soils to nonagricultural uses, it is unlikely for the reasons stated above and addressed in this EIR. Overall, as the Program is designed to encourage and streamline renewable energy development in areas that would not involve conversion of Important Agricultural Soils, it would not result in a considerable contribution to a cumulative impact.

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3.3 Air Quality

This section examines the air quality in San Luis Obispo County, includes a summary of applicable air quality regulations, and analyzes potential air quality impacts associated with implementation of the Renewable Energy Streamlining Program (RESP or Program). This section is primarily based on applicable information provided by the County's Conservation and Open Space Element (COSE) (2010), which was adopted in 2010, the County EnergyWise Plan (2011), the San Luis Obispo County Air Pollution Control District's (SLOAPCD) CEQA Air Quality Handbook (2012), and the SLOAPCD's Clean Air Plan (2001).

3.3.1 PHYSICAL SETTING

San Luis Obispo County is part of the South Central Coast Air Basin (SCCAB), which also includes Santa Barbara and Ventura counties. Because air quality is influenced by topography and meteorological conditions as opposed to planning boundaries, this section discusses air quality at the overall county level, rather than by County planning area.

CLIMATE

The county's climate 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 county's air pollution meteorology.

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 Planning Area communities throughout much of the fall and winter.

AIR POLLUTANTS OF CONCERN

The air pollutants emitted into the ambient air by stationary and mobile sources (predominantly mobile sources) are regulated by federal and state law. These regulated air pollutants are known as "criteria air pollutants" and are categorized into primary and secondary pollutants. Primary air pollutants are those that are emitted directly from sources. Carbon monoxide (CO), reactive organic gases (ROG), nitrogen oxide (NO_X), sulfur dioxide (SO_2), coarse particulate matter (PM_{10}), fine particulate matter ($PM_{2.5}$), lead, and fugitive dust are primary air pollutants. Of these, CO, SO_2, PM_{10}, and $PM_{2.5}$ are criteria pollutants. ROG and NO_X are criteria pollutant precursors and go on to form secondary criteria pollutants through chemical and photochemical reactions in the atmosphere. Ground-level ozone (O_3), as differentiated from stratospheric ozone that constitutes the protective ozone layer, and nitrogen dioxide (NO_2) are the principal secondary pollutants.

Other pollutants, such as carbon dioxide, a natural byproduct of animal respiration that is also produced in the combustion process, have been linked to such phenomena as climate change. While there are no adopted thresholds for their release, Assembly Bill (AB) 32 requires the state to reduce emissions to 1990 levels by 2020, which is discussed further in Section 3.7, Greenhouse Gases and Climate Change. These pollutants do not jeopardize the air basin's attainment status. Sources and health effects commonly associated with criteria pollutants are summarized in **Table 3.3-1**.

TABLE 3.3-1
CRITERIA AIR POLLUTANTS SUMMARY OF COMMON SOURCES AND EFFECTS

Pollutant	Major Man-Made Sources	Human Health & Welfare Effects
Carbon Monoxide (CO)	An odorless, colorless gas formed when carbon in fuel is not burned completely; a component of motor vehicle exhaust.	Reduces the ability of blood to deliver oxygen to vital tissues, affecting the cardiovascular and nervous system. Impairs vision, causes dizziness, and can lead to unconsciousness or death.
Nitrogen Dioxide (NO2)	A reddish-brown gas formed during fuel combustion for motor vehicles and industrial sources. Sources include motor vehicles, electric utilities, and other sources that burn fuel.	Respiratory irritant; aggravates lung and heart problems. Precursor to ozone and acid rain. Contributes to global warming and nutrient overloading which deteriorates water quality. Causes brown discoloration of the atmosphere.
Ozone (O3)	Formed by a chemical reaction between volatile organic compounds (VOC) and nitrous oxides (NOx) in the presence of sunlight. VOCs are also commonly referred to as reactive organic gases (ROGs). Common sources of these precursor pollutants include motor vehicle exhaust, industrial emissions, gasoline storage and transport, solvents, paints, and landfills.	Irritates and causes inflammation of the mucous membranes and lung airways; causes wheezing, coughing, and pain when inhaling deeply; decreases lung capacity; aggravates lung and heart problems. Damages plants; reduces crop yield. Damages rubber, some textiles and dyes.
Particulate Matter (PM10 & PM2.5)	Produced by power plants, steel mills, chemical plants, unpaved roads and parking lots, wood-burning stoves and fireplaces, automobiles and others.	Increased respiratory symptoms, such as irritation of the airways, coughing, or difficulty breathing; aggravated asthma; development of chronic bronchitis; irregular heartbeat; nonfatal heart attacks; and premature death in people with heart or lung disease. Impairs visibility (haze).
Sulfur Dioxide (SO2)	A colorless, nonflammable gas formed when fuel containing sulfur is burned; when gasoline is extracted from oil; or when metal is extracted from ore. Examples are petroleum refineries, cement manufacturing, metal processing facilities, locomotives, and ships.	Respiratory irritant. Aggravates lung and heart problems. In the presence of moisture and oxygen, sulfur dioxide converts to sulfuric acid which can damage marble, iron and steel. Damages crops and natural vegetation. Impairs visibility. Precursor to acid rain.
Lead	Metallic element emitted from metal refineries, smelters, battery manufacturers, iron and steel producers, use of leaded fuels by racing and aircraft industries.	Anemia, high blood pressure, brain and kidney damage, neurological disorders, cancer, lowered IQ. Affects animals, plants, and aquatic ecosystems.

Source: CAPCOA 2011

AIR QUALITY

About 75 percent of the county's population and a corresponding proportion of the commercial and industrial facilities are located within the Coastal Plateau (Coastal Zone, North County (portion), San Luis Obispo, and South County (portion) Planning Areas). 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 (North County Planning Area), located in the north central part of the county, houses roughly 25 percent of the county's population. Historically, this region has experienced the highest ozone and particulate levels in the county. Transport of ozone precursors from the Coastal Plateau and from the San Joaquin Valley may contribute to this condition. The East County Plain (North County (portion), Carrizo, and South County (portion) Planning Areas) 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.

Existing air quality and historical trends and projections in the county are documented by measurements made by the SLOAPCD, the local air pollution regulatory agency, who maintain air quality monitoring stations throughout the county. Air quality monitoring sites in the county are located at Atascadero, Carrizo Plains Elementary School, Morro Bay, Nipomo-Regional Park, Paso Robles, Red Hills, and San Luis Obispo. **Table 3.3-2** shows historical occurrences of O_3, PM_{10}, and $PM_{2.5}$ pollutant levels exceeding state and federal ambient air quality standards for the three-year period of 2011, 2012, and 2013 at all the listed monitoring stations except Morro Bay, since this station is located in the Coastal Zone Planning Area, which is not affected by the proposed Program. Ozone, PM_{10}, and $PM_{2.5}$ are the most important pollutants affecting the county.

Due to various meteorological factors, including wind, air pollutant measurements within the county are sometimes influenced from surrounding areas including the ocean (ship emissions) as well as air pollution generated in other counties.

TABLE 3.3-2
AMBIENT AIR QUALITY MONITORING DATA FOR SAN LUIS OBISPO COUNTY

Pollutant Standards	2011	2012	2013
Atascadero-Lewis Avenue Monitoring Station (North County Planning Area)			
Ozone			
Max 1-hour concentration (ppm)	0.073	0.083	0.073
Max 8-hour concentration (ppm) (state/federal)	0.064 / 0.063	0.070 / 0.070	0.070 / 0.070
Number of days above state 1-hour standard	0	0	0
Number of days above state/federal 8-hour standard	0 / 0	0 / 0	0 / 0
Coarse Particulate Matter			
Max 24-hour concentration (μg/m3) (state/federal)	76.4 / 75.9	64.7 / 62.8	58.2 / 59.0
Number of days above state/federal standard	* / 0	2.0 / 0	2.0 / 0
Fine Particulate Matter			
Max 24-hour concentration (μg/m3) (state/federal)	33.1 / 33.1	33.7 / 33.7	33.0 / 33.0
Number of days above federal standard	0	0	0
Red Hills Monitoring Station (North County Planning Area)			
Ozone			
Max 1-hour concentration (ppm)	0.086	0.090	0.087

Pollutant Standards	2011	2012	2013
Max 8-hour concentration (ppm) (state/federal)	0.081 / 0.080	0.088 / 0.087	0.082 / 0.081
Number of days above state 1-hour standard	0	0	0
Number of days above state/federal 8-hour standard	19 / 3	33 / 10	12 / 3
Coarse Particulate Matter			
Max 24-hour concentration (μg/m3) (state/federal)	* / *	* / *	* / *
Number of days above state/federal standard	* / *	* / *	* / *
Fine Particulate Matter			
Max 24-hour concentration (μg/m3) (state/federal)	* / *	* / *	* / *
Number of days above federal standard	* / *	* / *	* / *
Paso Robles-Santa Fe Avenue Monitoring Station (North County Planning Area)			
Ozone			
Max 1-hour concentration (ppm)	0.076	0.081	0.072
Max 8-hour concentration (ppm) (state/federal)	0.068 / 0.067	0.070 / 0.069	0.067 / 0.067
Number of days above state 1-hour standard	0	0	0
Number of days above state/federal 8-hour standard	0 / 0	0 / 0	0 / 0
Coarse Particulate Matter			
Max 24-hour concentration (μg/m3) (state/federal)	113.4 / *	61.3 / *	595.6 / 596.0
Number of days above state/federal standard	2.0 / *	2.0 / *	19.4 / *
Fine Particulate Matter			
Max 24-hour concentration (μg/m3) (state/federal)	* / *	* / *	* / *
Number of days above federal standard	* / *	* / *	* / *
Carrizo Plains School Monitoring Station (Carrizo Planning Area)			
Ozone			
Max 1-hour concentration (ppm)	0.090	0.083	0.073
Max 8-hour concentration (ppm) (state/federal)	0.080 / 0.079	0.086 / 0.085	0.074 / 0.074
Number of days above state 1-hour standard	0	0	0
Number of days above state/federal 8-hour standard	11 / 5	18 / 3	3 / 0
Coarse Particulate Matter			
Max 24-hour concentration (μg/m3) (state/federal)	* / *	* / *	* / *
Number of days above state/federal standard	* / *	* / *	* / *
Fine Particulate Matter			
Max 24-hour concentration (μg/m3) (state/federal)	* / *	* / *	* / *
Number of days above federal standard	* / *	* / *	* / *
Nipomo-Regional Park Monitoring Station (South County Planning Area)			

Pollutant Standards	2011	2012	2013
Ozone			
Max 1-hour concentration (ppm)	0.075	0.065	0.076
Max 8-hour concentration (ppm) (state/federal)	0.071 / 0.070	0.060 / 0.059	0.072 / 0.072
Number of days above state 1-hour standard	0	0	0
Number of days above state/federal 8-hour standard	1 / 0	0 / 0	1 / 0
Coarse Particulate Matter			
Max 24-hour concentration (μg/m3) (state/federal)	63.8 / 62.3	76.8 / 75.5	109.7 / 107.3
Number of days above state/federal standard	3.0 / 0	10.7 / 0	20.2 / 0
Fine Particulate Matter (*data derived from Nipomo-Guadalupe Road Monitoring Station*)			
Max 24-hour concentration (μg/m3) (state/federal)	24.1 / 24.1	36.9 / 36.9	32.0 / 32.0
Number of days above federal standard	0	1	0
San Luis Obispo-3220 South Higuera Street Monitoring Station (San Luis Obispo Planning Area)			
Ozone			
Max 1-hour concentration (ppm)	0.078	0.070	0.067
Max 8-hour concentration (ppm) (state/federal)	0.066 / 0.065	0.057 / 0.056	0.061 / 0.061
Number of days above state 1-hour standard	0	0	0
Number of days above state/federal 8-hour standard	0 / 0	0 / 0	0 / 0
Coarse Particulate Matter			
Max 24-hour concentration (μg/m3) (state/federal)	91.7 / 21.1	102.1 / *	75.6 / 70.5
Number of days above state/federal standard	* / *	* / *	* / *
Fine Particulate Matter			
Max 24-hour concentration (μg/m3) (state/federal)	17.7 / 17.7	15.4 / 15.4	53.7 / 53.7
Number of days above federal standard	0	0	1

Source: CARB 2014a

Notes:

μg/m3 = micrograms per cubic meter; ppm = parts per million

** = No data is currently available from CARB to determine the value.*

As previously stated, ozone, PM_{10}, and $PM_{2.5}$ are the most important pollutants affecting the county. **Table 3.3-3** shows the state attainment status for the SCCAB and thus the county. Areas with air quality that exceed adopted air quality standards are designated as nonattainment areas for the relevant air pollutants. Areas that comply with air quality standards are designated as attainment areas for the relevant air pollutants. The region is nonattainment for state ozone and PM_{10} standards (CARB 2014b).

TABLE 3.3-3
FEDERAL AND STATE AMBIENT AIR QUALITY ATTAINMENT STATUS
FOR THE SAN LUIS OBISPO COUNTY PORTION OF THE SOUTH CENTRAL COAST AIR BASIN

Pollutant	Attainment Status
1-Hour Ozone (O_3)	Nonattainment
8-Hour Ozone (O_3)	Nonattainment
Coarse Particulate Matter (PM_{10})	Nonattainment
Fine Particulate Matter ($PM_{2.5}$)	Attainment
Carbon Monoxide (CO)	Attainment
Nitrogen Dioxide (NO_2)	Attainment
Sulfur Dioxide (SO_2)	Attainment

Source: CARB 2014b

Notes: The San Luis Obispo portion of the SCCAB is also designated nonattainment for ozone under federal Clean Air Act standards. State Implementation Plans (SIPs) must be prepared by states for areas designated as federal nonattainment areas to demonstrate how the area will come into attainment of the exceeded federal ambient air quality standard.

TOXIC AIR CONTAMINANTS

In addition to the criteria pollutants discussed above, toxic air contaminants (TACs) are another group of pollutants of concern. TACs are considered either carcinogenic or noncarcinogenic based on the nature of the health effects associated with exposure to the pollutant. For regulatory purposes, carcinogenic TACs are assumed to have no safe threshold below which health impacts would not occur, and cancer risk is expressed as excess cancer cases per one million exposed individuals. Noncarcinogenic TACs differ in that there is generally assumed to be a safe level of exposure below which no negative health impact is believed to occur. These levels are determined on a pollutant-by-pollutant basis.

There are many different types of TACs, with varying degrees of toxicity. Sources of TACs include industrial processes, such as petroleum refining and chrome-plating operations; commercial operations, such as gasoline stations and dry cleaners; and motor vehicle exhaust. Public exposure to TACs can result from emissions from normal operations, as well as from accidental releases of hazardous materials during upset conditions. The health effects of TACs include cancer, birth defects, neurological damage, and death.

To date, the California Air Resources Board (CARB) has designated nearly 200 compounds as toxic air contaminants and has implemented control measures for a number of compounds that pose high risks and show potential for effective control. The majority of the estimated health risks from TACs can be attributed to relatively few compounds, one of the most important in California being particulate matter from diesel-fueled engines. In 1998, CARB identified particulate emissions from diesel-fueled engines (diesel PM) as a TAC. Previously, the individual chemical compounds in diesel exhaust were considered TACs. Almost all diesel exhaust particle mass is 10 microns or less in diameter. Because of their extremely small size, these particles can be inhaled and eventually trapped in the bronchial and alveolar regions of the lung.

Naturally Occurring Asbestos

CARB has identified naturally occurring asbestos (NOA) as a toxic air contaminant. NOA occurs in rocks and soil as a result of natural geological processes. Natural weathering and human activities, such as construction, may disturb NOA-bearing rock or soil and release mineral fibers into the air, which pose a greater potential for human exposure by inhalation. NOA-bearing rock/soil has been identified in San Luis Obispo County.

SENSITIVE RECEPTORS

Some land uses are considered more sensitive to air pollution than others due to the types of population groups or activities involved. Sensitive population groups include children, the elderly, the acutely ill, and the chronically ill, especially those with cardiorespiratory diseases.

Residential areas are considered to be sensitive receptors to air pollution because residents (including children and the elderly) tend to be at home for extended periods of time, resulting in sustained exposure to any pollutants present. Schools are also considered sensitive receptors, as children are present for extended durations and engage in regular outdoor activities. Recreational land uses are considered moderately sensitive to air pollution. Although exposure periods are generally short, exercise places a high demand on respiratory functions, which can be impaired by air pollution. In addition, noticeable air pollution can detract from the enjoyment of recreation.

VALLEY FEVER

Valley fever (*Coccidioidomycosis*) is caused by the fungus *Coccidioides immitis*, which is commonly found within the soil in specific areas and can be stirred into the air by anything that disrupts the soil, such as farming, construction, and wind. The fungi can then be breathed into the lungs and cause valley fever. Valley fever is found in the southwestern United States including in Arizona, California, New Mexico, Nevada, and Utah, as well as in parts of Mexico. In about 50 to 75 percent of people, valley fever causes either no symptoms or mild symptoms and those infected never seek medical care; when symptoms are more pronounced, they usually are observed as lung problems (cough, shortness of breath, sputum production, fever, and chest pains). The disease can progress to chronic or progressive lung disease and may even become disseminated to the skin, lining tissue of the brain (meninges), skeleton, and other body areas. The disease can also infect many animal types (for example, dogs, cattle, otters, and monkeys).

From 1998 to 2011, the incidence in the United States increased about tenfold to about 22,000 diagnosed individuals per year, according to the Centers for Disease Control and Prevention. People are infected by inhaling dust contaminated with *Coccidioides*; the fungus is not transmitted from person to person. About 30–35 percent of people who develop valley fever have flu-like symptoms (fever, cough, malaise, and chills) that dissipate over about two to six weeks without treatment. Some people may develop additional symptoms such as shortness of breath, night sweats, headaches, sputum production, and joint and muscle pains (symptoms resembling pneumonia). Women, more often than men, may develop erythema nodosum (reddish, painful, tender lumps, usually on the legs) or erythema multiforme (an allergic reaction similar to erythema nodosum in multiple body sites with rash). Usually these symptoms resolve in about two to six weeks (MedicineNet 2014). Several antifungal drugs are available to treat valley fever. However, in general, dosage (especially pediatric), length of time of drug administration, and the choice of drug are best decided in consultation with an infectious disease specialist (MedicineNet 2014).

3.3.2 REGULATORY SETTING

STATE

California Air Resources Board (CARB)

CARB has jurisdiction over all air pollutant sources in the state; it delegated responsibility for stationary sources to local air districts and retained authority over emissions from mobile sources. The county's local air district is the SLOAPCD. Similar in concept to the national ambient air quality standards (NAAQS), CARB established the California ambient air quality standards (CAAQS). Comparing the criteria pollutant concentrations in ambient air to the CAAQS determines state attainment status for criteria pollutants in a given region. CARB, in partnership with local California air quality management districts, developed a pollutant-monitoring network to aid attainment of CAAQS. The network consists of numerous monitoring stations throughout California that monitor and report various pollutants' concentrations in ambient air.

California Clean Air Act

The California Clear Air Act (CCAA) went into effect in January 1, 1989, and was amended in 1992 (California Health and Safety Code, Division 26). The CCAA mandates achieving the health-based CAAQS at the earliest practical date.

Air Quality Standards

The State of California has established health-based ambient air quality standards (CAAQS) for 11 air pollutants. As shown in **Table 3.3-4**, these pollutants include O_3, CO, NO_2, SO_2, PM_{10}, $PM_{2.5}$, lead, sulfates, hydrogen sulfide, vinyl chloride, and visibility-reducing particles. These standards are designed to protect the health and welfare of the populace with a reasonable margin of safety.

TABLE 3.3-4
AIR QUALITY STANDARDS

Pollutant	Averaging Time	California Standards
Ozone (O_3)	8 Hour	0.070 ppm (137μg/m^3)
	1 Hour	0.09 ppm (180 μg/m^3)
Carbon Monoxide (CO)	8 Hour	9.0 ppm (10 mg/m^3)
	1 Hour	20 ppm (23 mg/m^3)
Nitrogen Dioxide (NO_2)	1 Hour	0.18 ppm (339 μg/m^3)
	Annual Arithmetic Mean	0.030 ppm (57 μg/m^3)
Sulfur Dioxide (SO_2)	24 Hour	0.04 ppm (105 μg/m^3)
	3 Hour	—
	1 Hour	0.25 ppm (665 μg/m^3)
Particulate Matter (PM_{10})	Annual Arithmetic Mean	20 μg/m^3
	24 Hour	50 μg/m^3
Particulate Matter – Fine ($PM_{2.5}$)	Annual Arithmetic Mean	12 μg/m^3
	24 Hour	N/A

Pollutant	Averaging Time	California Standards
Sulfates	24 Hour	25 $\mu g/m^3$
Lead (Pb)	Calendar Quarter	N/A
	30 Day Average	1.5 $\mu g/m^3$)
Hydrogen Sulfide	1 Hour	0.03 ppm (42 $\mu g/m^3$)
Vinyl Chloride (chloroethene)	24 Hour	0.01 ppm (26 $\mu g/m^3$)
Visibility-Reducing Particles	8 Hour (10:00 to 18:00 PST)	—

Source: CARB 2013

Notes: mg/m^3 = milligrams per cubic meter; ppm = parts per million; ppb = parts per billion; $\mu g/m^3$ = micrograms per cubic meter

Air Quality Attainment Plans

The California Clean Air Act of 1988 mandated the preparation of clean air plans that provide an overview of air quality and sources of air pollution and identify pollution-control measures needed to meet federal and state air quality standards. The SLOAPCD is responsible for formulating and implementing the clean air plan for San Luis Obispo County. The plan provides an overview of the regional air quality and sources of air pollution and identifies the pollution-control measures needed to meet clean air standards. The schedule for plan development is outlined by state and federal requirements and is influenced by regional air quality. Clean air plans affect the development of SLOAPCD rules and regulations and other programs. They also influence a range of activities outside the district, including transportation planning, allocation of money designated for air quality projects, and more.

Last adopted in March 2002, the SLOAPCD Clean Air Plan outlines the district's strategies to reduce O_3 precursor emissions from a wide variety of stationary and mobile sources. Analysis of several long-term air quality trends in the county demonstrates that O_3 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 Clean Air Plan.

In 2003, the California Legislature enacted Senate Bill (SB) 656 (Sher) to reduce public exposure to particulate matter (PM_{10} and $PM_{2.5}$, collectively referred to as PM). SB 656 required CARB, in consultation with local air pollution control districts, to develop and adopt a list of PM reduction strategies. The SLOAPCD adopted the PM Report and associated control measures in 2005. The report identifies PM control for five primary categories and associated measures. The categories include paved and unpaved roads, open burning, fugitive dust, refinery activities and use of furnaces, and particulate exhaust concentrations. The top five sources of direct PM_{10} emissions are area sources—unpaved road dust, paved road dust, construction and demolition, prescribed burning, and farming operations (dust). These sources contribute 77 percent of the total PM_{10} emissions in the county.

LOCAL

San Luis Obispo Air Pollution Control District

The SLOAPCD is the regional agency responsible for rulemaking, permitting, and enforcement activities affecting stationary sources in the county. The SLOAPCD monitors county air quality, reviews land use projects, develops and enforces rules and regulations, issues permits, and

creates long-term air quality 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. The SLOAPCD also implements programs to promote alternative means of transportation, such as carpooling, telecommuting, and use of clean vehicle technologies.

Specific rules and regulations adopted by the SLOAPCD limit the emissions that can be generated by various activities and identify specific pollution reduction measures that must be implemented in association with various activities. These rules regulate not only emissions of the six criteria air pollutants but also toxic emissions and acutely hazardous non-radioactive materials emissions. Emissions sources subject to these rules are regulated through the SLOAPCD's permitting process and standards of operation. Through this permitting process, the SLOAPCD monitors generation of stationary emissions and uses this information in developing its air quality plans. Any sources of stationary emissions constructed as part of a proposed Program would be subject to SLOAPCD rules and regulations. Both federal and state ozone plans rely on stationary source control measures set forth in SLOAPCD rules and regulations. With respect to the construction activities associated with development instigated by the proposed Program, applicable SLOAPCD regulations would relate to architectural coatings (Rule 433, Architectural Coatings) and paving materials (Rule 420, Cutback Asphalt Paving Materials). With respect to the operational phase of a project, SLOAPCD Rule 601, New Source Performance Standards, would apply to any new or modified stationary sources in the county.

The SLOAPCD has established significance criteria that may be relied upon in order to make determinations concerning air quality impacts. According to the SLOAPCD, an air quality impact is considered significant if a proposed Program would violate any ambient air quality standard, contribute substantially to an existing or projected air quality violation, or expose sensitive receptors to substantial pollutant concentrations. The SLOAPCD has established thresholds of significance for air quality for construction and operational activities of land use development projects, as shown in **Table 3.3-5**.

TABLE 3.3-5
SLOAPCD SIGNIFICANCE THRESHOLDS

Air Pollutant	Construction Activities			Operations	
	Daily	Quarterly Tier 1	Quarterly Tier 2	Daily	Annual
Reactive Organic Gases (ROG) & Nitrogen Oxide (NO_x) Combined	137 lbs	2.5 tons	6.3 tons	25 lbs	25 tons
Diesel Particulate Matter (DPM)	7 lbs	0.13 tons	0.32 tons	1.25 lbs	NA
Fugitive Particulate Matter (PM_{10}), Dust	N/A	2.5 tons	N/A	25 lbs	25 tons
Carbon Monoxide (CO)	N/A	N/A	N/A	550 lbs	N/A

Source: SLOAPCD 2012

In terms of potential construction impacts, mitigation of such activities is required when the emission thresholds are equaled or exceeded by fugitive and/or combustion emissions. SLOAPCD construction mitigation measures are designed to reduce emissions (ROG, NOx, diesel particulate matter (DPM), and PM_{10}) from heavy-duty construction equipment and may include emulsified fuels, catalyst and filtration technologies, engine replacement, new alternative fueled trucks, and implementation of Construction Activity Management Plans (SLOAPCD 2012). The mitigation measures for construction activity are delineated in three separate sections:

- Standard Mitigation Measures
- Best Available Control Technologies (BACT) and Construction Activity Management Plans
  - Construction Activity Management Plans (CAMP)
  - Retrofit Devices and Alternative Fuels
  - Repowers
- Fugitive Dust Mitigation Measures (SLOAPCD 2012)

Construction-generated emissions from development projects that cannot be adequately mitigated with on-site mitigation measures alone would require off-site mitigation in order to reduce air quality impacts to a level of insignificance.

In addition, all construction activities are required to be managed in order to ensure that dust emissions are adequately controlled to below the 20 percent opacity limit identified in SLOAPCD Rule 401, Visible Emissions, and to ensure that dust is not emitted off-site. The correct fugitive dust mitigation program for a given project depends on the project scale or proximity to sensitive receptors. For example, development projects with grading areas that are less than 4 acres and that are not within 1,000 feet of any sensitive receptor must implement a set of SLOAPCD established mitigation measures from the SLOAPCD Fugitive Dust Mitigation Measures: Short List to minimize nuisance impacts and to significantly reduce fugitive dust emissions. Development projects with grading areas that are greater than 4 acres or are within 1,000 feet of any sensitive receptor are required to implement an expanded program of mitigation measures from the SLOAPCD Fugitive Dust Mitigation Measures: Expanded List.

In terms of potential operational air quality impacts, the SLOAPCD identified mitigation in order to reduce a project's emissions when thresholds are equaled or exceeded. Most of the long-term operational mitigation strategies suggested by the SLOAPCD focus on methods to reduce vehicle trips and travel distance, including site design standards which encourage pedestrian- and bicycle-friendly transit-oriented development (SLOAPCD 2012). In addition, the recommendations include design strategies for residential and commercial buildings that address energy conservation and other concepts to reduce total project emissions. According to the SLOAPCD (2012), project mitigation for operational impacts should follow the guidelines listed below.

- Projects with the potential to generate 25–29 pounds per day of combined ROG and NO_x or PM_{10} emissions should select and implement at least 8 mitigation measures from the SLOAPCD mitigation list.
- Projects generating 30–34 pounds per day of combined ROG and NO_x or PM_{10} emissions should select and implement at least 14 mitigation measures from the SLOAPCD mitigation list.
- Projects generating 35–50 pounds per day of combined ROG and NO_x or PM_{10} emissions should implement at least 18 measures from the SLOAPCD mitigation list.
- Projects generating 50 pounds per day or more of combined ROG and NO_x or PM_{10} emissions should select and implement all feasible measures from the SLOAPCD mitigation list. Further mitigation measures may also be necessary, including off-site measures, depending on the nature and size of the project and the effectiveness of the mitigation measures proposed.

- Projects generating 25 tons per year or more of combined ROG and NO_x or PM_{10} emissions will need to implement all feasible measures from the SLOAPCD mitigation list as well as off-site mitigation measures, depending on the nature and size of the project and the effectiveness of the on-site mitigation measures proposed.

The SLOAPCD also issues annual reports that address issues such as air quality summaries for each year as well as air quality trends.

County of San Luis Obispo General Plan

General Plan policies related to air quality are designed to help ensure that regional and local air quality is as healthful as possible. For instance, the County's Guiding Principles for Strategic Growth address the interconnection of land use, resource conservation, and quality of life, and the Land Use Element's Framework for Planning (Inland and Coastal) reflects the County's Strategic Growth principles and goals. The air quality goals, policies, and implementation strategies contained in the General Plan are compatible and consistent with the Strategic Growth principles and provide specific direction to achieve and maintain the county's desired air quality.

Land Use Element and Resource Management System

The General Plan Land Use Element contains the Resource Management System (RMS), which identifies the county's resource capacities as well as how those resources relate to future growth and development. The Land Use Element RMS contains air quality as a policy area. A biennial Summary Report is prepared evaluating each of the resources within specific communities, including air quality, and then recommends an alert level (Level of Severity), when applicable, after consideration of existing and/or foreseeable future conditions. When the harshest alert level is recommended (LOS III), it is then taken to the Board of Supervisors for an action, such as having a Resource Capacity Study prepared and/or certification of the recommended severity. Certification typically includes measures to resolve the identified problem(s).

In the most general terms, the goal of the RMS is to provide information in support of decisions about balancing land development and population growth with the air quality resources required to support them. The RMS operates on two distinct levels. Attention is first given to the development of the county as a whole. The Land Use Element guides population growth where it can be supported by existing resources, using the RMS as an information tool. The countywide perspective must persist throughout the analysis of community resources and recommendations for resource management measures.

The second level of the RMS is the community. Each community is evaluated with respect to resource availability and capacity, as well as the effects of community development on surrounding agricultural lands and rural areas. When an individual community is perceived to have a potential resource problem, steps must be taken to correct the situation and, if necessary, utilize various methods to redirect growth to communities that have the capability to support additional population (the harshest alert level currently in effect is LOS II for the North County Planning Area). The Land Use Element combines both perspectives described above in an effort to resolve issues of distribution and location rather than growth versus no growth.

According to the General Plan Land Use Element RMS, three different indicators can be used to track the status of air quality: ambient air monitoring data, emissions inventory information, and the remaining emission control measures available to reduce emissions within the air quality planning area.

Conservation and Open Space Element (COSE)

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

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

Each of these goals is further developed into policies and implementation strategies. For instance, Conservation and Open Space Element Implementation Strategy AQ 3.1.1 requires coordination with the SLOAPCD to identify feasible, cost-effective, consistent, and comprehensive air quality mitigation measures and programs to reduce short-term, operational, and cumulative impacts of new development on air quality. Also, Implementation Strategy AQ 3.2.1 requires the use of the SLOAPCD's CEQA Guidelines to determine significance of impacts and to identify minimum project design and mitigation requirements.

County of San Luis Obispo Code Section 22.10.030 – Air Quality

Section 22.10.030 of the County Code establishes a procedure for the notification of the 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. County Code Section 22.10.030 mandates that a copy of any development application be forwarded to the SLOAPCD for review. This referral is intended to enable the SLOAPCD to determine whether the proposed use is required by the rules and regulations of the SLOAPCD to obtain an authority to construct or permit to operate, if the proposed Program exceeds the district's significance thresholds for significant air quality impacts from land use projects, and if mitigations are required. The air district has developed a CEQA Handbook that defines these thresholds and mitigation measures, as previously described.

County of San Luis Obispo Code Section 22.52.160 – Construction Procedures

Section 22.52.160 of the County Code establishes standard measures for the control of fugitive dust emissions generated during construction activities. Section 22.52.160 requires that all surfaces and materials be managed to ensure that fugitive dust emissions are adequately controlled to below the 20 percent opacity limit, identified in the SLOAPCD's Rule 401, Visible Emissions, and to ensure that dust is not emitted off-site. Section 22.52.160 applies to surfaces that will be graded, that are currently being graded, or that have been graded and to all materials, whether filled, excavated, transported, or stockpiled. Required fugitive dust control measures include the following:

A. *All projects involving grading or site disturbance shall implement the following mitigation measures to minimize nuisance impacts and to significantly reduce fugitive dust emissions:*

(1) Reduce the amount of the disturbed area where possible;

(2) Use water trucks or sprinkler systems in sufficient quantities to prevent airborne dust from leaving the site. Increased watering frequency shall be required whenever wind speeds exceed 15 mph. Reclaimed (non-potable) water shall be used whenever possible;

(3) All dirt stock-pile areas shall be sprayed daily as needed; and

(4) All roadways, driveways, sidewalks, etc. to be paved shall be completed as soon as possible, and building pads shall be laid as soon as possible after grading unless seeding or soil binders are used.

B. Projects with site disturbance that exceeds four acres or are within 1,000 feet of any sensitive receptor shall implement the following mitigation measures to minimize nuisance impacts and to significantly reduce fugitive dust emissions:

(1) All measures identified in Subsection C.1.a;

(2) Permanent dust control measures identified in the approved project plans shall be implemented as soon as possible following completion of any soil disturbing activities;

(3) Exposed ground areas that are planned to be reworked at dates greater than one month after initial grading shall be sown with a fast germinating native grass seed and watered until vegetation is established;

(4) All disturbed soil areas not subject to revegetation shall be stabilized using approved chemical soil binders, jute netting, or other methods approved in advance by the SLOAPCD;

(5) Vehicle speed for all construction vehicles shall not exceed 15 mph on any unpaved surface at the construction site;

(6) All trucks hauling dirt, sand, soil, or other loose materials are to be covered or shall maintain at least two feet of freeboard (minimum vertical distance between top of load and top of trailer) in accordance with California Vehicle Code Section 23114;

(7) Install wheel washers where vehicles enter and exit unpaved roads onto streets, or wash off trucks and equipment leaving the site; and

(8) Sweep streets at the end of each day if visible soil material is carried onto adjacent paved roads. Water sweepers with reclaimed water shall be used where feasible.

In addition to these requirements, Section 22.52.160 addresses the potential to encounter NOA during construction by mandating that grading work comply with the CARB Asbestos Air Toxics Control Measure (ATCM) for construction and grading. This measure requires that prior to any grading activities in NOA candidate areas, the project proponent must ensure that a geologic evaluation is conducted to determine if NOA is present within the area that will be disturbed. If NOA is not present, an exemption request must be filed with the Air Pollution Control District. If

NOA is found at the site, the applicant must comply with all requirements outlined in the Asbestos ATCM. This may include development of an Asbestos Dust Mitigation Plan and an Asbestos Health and Safety Program for approval by the SLOAPCD.

Summary of Local Regulations and Policies

Table 3.3-6 summarizes regulations and policies from the documents described above.

TABLE 3.3-6
LOCAL POLICIES AND REGULATIONS FOR AIR QUALITY

Applicable Code Section	Summary
Countywide	
Conservation and Open Space Element, Policy AQ 1.2	Require projects subject to discretionary review to minimize additional vehicle travel.
Conservation and Open Space Element, Policy AQ 2.2	Reduce employee work-related vehicle trips.
Conservation and Open Space Element, Policy AQ 3.1	Coordinate with neighboring jurisdictions and affected agencies to address cross-jurisdictional and regional transportation and air quality issues.
Conservation and Open Space Element, Policy AQ 3.2	Attain or exceed federal or state ambient air quality standards (the more stringent if not the same) for measured criteria pollutants.
Conservation and Open Space Element, Policy AQ 3.3	Avoid a net increase in criteria air pollutant emissions in planning areas certified as Level of Severity II or III for Air Quality by the County's Resource Management System (RMS).
Conservation and Open Space Element, Policy AQ 3.4	Minimize public exposure to toxic air contaminants, ozone, particulate matter, sulfur dioxide, carbon monoxide, nitrogen oxides, and lead.
Conservation and Open Space Element, Policy AQ 3.5	Ensure that land use decisions are equitable and protect all residents from the adverse health effects of air pollution.
Conservation and Open Space Element, Policy AQ 3.6	Ensure that implementation of the Strategic Growth principles and goals are balanced with protection of sensitive receptors near high-volume transportation routes and sources of toxic emissions (i.e., rail yards, downtown centers, gasoline development facilities, chrome platers, dry cleaners, and refineries).
Conservation and Open Space Element, Policy AQ 3.7	Encourage the reduction of heavy-vehicle idling throughout the county, particularly near schools, hospitals, senior care facilities, and areas prone to concentrations of people, including residential areas.
Land Use and Circulation Element, Principle 1, Policy 4	Preserve and protect the air quality of the county by seeking to exceed or at least maintain the minimum state and federal ambient air quality standards.
County Code Title 22, Section 22.10.030	A copy of any development application shall be forwarded to the SLOAPCD for review with the intent to enable the SLOAPCD to determine if the use proposed is required to obtain an authority to construct or permit to operate, if the proposed project exceeds the district's significance thresholds for significant air quality impacts from land use projects, and if mitigations are required, as previously described.
County Code Title 22, Section 22.52.160	Establishes standard measures for the control of fugitive dust emissions generated during construction activities as described above.

Applicable Code Section	Summary
Carrizo Planning Area	
No additional policies or standards for the Carrizo Planning Area.	
North County Planning Area	
No additional policies or standards for the North County Planning Area.	
San Luis Obispo Planning Area	
No additional policies or standards for the San Luis Obispo Planning Area.	
South County Planning Area	
No additional policies or standards for the South County Planning Area.	

3.3.3 IMPACTS AND MITIGATION MEASURES

THRESHOLDS OF SIGNIFICANCE

An air quality impact is considered significant if implementation of the RESP would result in any of the following:

1) Violate any state or federal ambient air quality standard, or exceed air quality emission thresholds as established by San Luis Obispo County Air Pollution Control District.

2) Expose any sensitive receptor to substantial air pollutant concentrations.

3) Create or subject individuals to objectionable odors.

4) Be inconsistent with the district's Clean Air Plan.

5) Result in a cumulatively considerable net increase of any criteria pollutant either considered in nonattainment under applicable state or federal ambient air quality standards that are due to increased energy use or traffic generation, or intensified land use change.

The reader is referred to Section 3.7, Greenhouse Gases and Climate Change, for a discussion of potential impacts associated with greenhouse gas generation.

METHODOLOGY

The impact analysis below utilizes the County of San Luis Obispo's General Plan policy provisions, development standard provisions of the County Code, and SLOAPCD guidance to determine whether implementation of the proposed RESP would result in a significant environmental air quality impact.

PROJECT IMPACTS AND MITIGATION MEASURES

Violate Any State or Federal Ambient Air Quality Standard, or Exceed Air Quality Emission Thresholds as Established by County Air Pollution Control District (Threshold 1)

Long-Term Operational Emissions

The renewable energy-generating facilities allowed under the proposed Program produce energy that is relatively emissions-free. One of the obvious benefits of solar and wind energy is that the production of electricity from these sources involves zero direct air pollutant emissions, with the exception of minimal emissions from worker trips and equipment usage associated with ongoing operations, maintenance, repair, and security. As discussed in Section 3.12, Effects Determined Not Significant, implementation of solar electric facilities (SEFs) and (wind energy conversion system (WECS) facilities would require a variety of transportation activities over the life of a project. Ongoing operations and maintenance of renewable energy-generating facilities would require worker commutes and deliveries of supplies.

Short-Term Construction Emissions

Construction-generated emissions are short term and of temporary duration, lasting only as long as construction activities occur, but possess the potential to represent a significant air quality impact. Short-term construction emissions would result in increased emissions of ozone-precursor pollutants (i.e., ROG and NO_X) and emissions of coarse and fine particulate matter. Emissions of ozone precursors would result from the operation of on-road and off-road motorized vehicles and equipment. Emissions of airborne particulate matter are largely associated with ground-disturbing activities, such as those occurring during site preparation.

The quantity of daily emissions, particularly ROG and NO_x emissions, generated by construction equipment used to implement solar electric facilities (SEFs) and wind energy conversion system (WECS) facilities allowed under the project would depend on the number of vehicles used and the hours of operation. The significance of fugitive dust (particulate matter) emissions would vary widely and would depend on the following factors: the aerial extent of disturbed soils and the length of disturbance time; whether existing structures are demolished; whether excavation is involved; and whether 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 substance used.

Potential impacts resulting from the exposure of valley fever and/or naturally occurring asbestos are evaluated under Threshold 2.

Impact 3-3-1 – Solar/Wind Implementation of the proposed Program could violate state or federal ambient air quality standards and exceed county air quality emission thresholds. This impact is considered a **less than significant (Class III)** impact.

Solar energy projects developed under the project would include solar photovoltaic panels mounted on rooftops of other structures as well as small to medium-sized ground-mounted systems. In addition to solar panels, solar photovoltaic projects typically include DC to AC inverters and transformers, additional electrical equipment, an interconnection or generation tie (gen-tie) line, telecommunications equipment, potentially a meteorological data collection system, switchgear buildings or structures, and security fencing. While some air pollutant emissions would be generated during the operation of renewable energy facilities from worker

trips and equipment usage associated with ongoing operations, maintenance, repair, and security, such emissions would be negligible. As stated in Section 2.0, Project Description, it is likely that up to 3 personnel would be required to service and maintain each Tier 1 SEF, Tier 2 SEF, and Tier 3 SEF facility. This would be comparable to about ½ the trips expected from one single family residence which would be considered a less than significant contribution to air emissions.

Construction of a rooftop solar project would occur entirely on top of a pre-existing structure and would occur within a built environment. Construction activities would include drilling, hammering, installation, and other activities, but they would be confined to the built environment footprint or a nearby laydown area. Rooftop construction would likely take one to two weeks, although the construction time and size of the workforce is directly related to the size of the roof and system. Additional time would be needed for pre- and post-permitting activities and inspections.

The proposed Program would also allow WECS facilities that are mounted to rooftops of existing structures. Small-scale wind projects generally comprise a rotor, generator, or alternator mounted on a frame, a tail, and a tower. Construction of these facilities would occur entirely on top of a pre-existing structure and would occur within a built environment. Construction activities would include drilling, hammering, installation, and other activities, but they would be confined to the built environment footprint or a nearby laydown area. Rooftop construction would likely take one to two weeks, although the construction time and size of the workforce is directly related to the size of the roof and system. Additional time would be needed for pre- and post-permitting activities and inspections.

Prior to beginning construction of a ground-mounted solar energy system, geotechnical testing would be required to establish the suitability of the site for construction and technology. For larger projects, up to a maximum of 160 acres in size, new access roads may be needed. Vegetation clearance and site grading may occur throughout the entire project site, although it is common for project design to result in minimal grading. Decommissioning of facilities would involve removal of all aboveground facilities and gravel work pads and roads. Subsurface facilities would be removed to a minimum depth of 3 feet from the surface and otherwise abandoned in place. Dismantled components would be staged at laydown areas before removal to disposal, reclamation, or recycling facilities. Reclamation of laydown areas, substations, access roads, and other disturbed areas would commence immediately upon completion of the dismantlement of the system. Soil remediation or landscaping would likely be required to return the location to pre-project conditions. The most likely heavy equipment used during these activities would include bulldozers, graders, excavators, scrapers, front-end loaders, and trucks, although other equipment may be needed depending on site conditions.

Permanent buildings may be required depending on the size of the facilities. Smaller facilities, such as those permitted in Tier 1 SEF and Tier 2 SEF would be less likely to have a permanent building, compared with Tier 3 SEF projects. Construction for Tier 1 SEF, Tier 2 SEF, and Tier 3 SEF projects is likely to take less than one year and for smaller projects, closer to six months. For a Tier 3 SEF project, construction personnel would average approximately 40 personnel. Tier 1 and Tier 2 SEF projects would average fewer personnel depending on the construction schedule and phasing.

While it is not possible to establish the exact proportion of the proposed Program that would be solar projects and wind projects, current renewable energy trends and the renewable resources in the county were considered, and it is assumed that the majority of renewable energy facilities allowed under the proposed Program would be solar projects, with minor numbers of wind projects. The total land footprint assumed for development of these projects is 1,500 acres. For the purposes of this analysis, it is assumed that development of these 1,500 acres would occur over a period of 10 years.

Since the actual phasing of future facilities allowed under the proposed Program is not known at this time, construction-related emissions were modeled to account for the greatest amount of disturbance proposed for a single Tier 3 SEF project (160 acres) in order to estimate the air pollutants resulting from the largest-scaled project allowed under the Program. Predicted maximum construction-generated emissions are summarized in **Table 3.3-7** and compared with SLOAPCD significance thresholds. Since the greatest amount of disturbance proposed for a single Tier 3 project would be greater than 4 acres or more than 1,200 cubic yards of material moved in a day, **Table 3.3-7** accounts for the SLOAPCD requirement to implement an expanded program of mitigation measures from the SLOAPCD Fugitive Dust Mitigation Measures: Expanded List; specifically, the application of water on the construction site, limitation of vehicle speed on unpaved roads, application of dust suppressants, daily cleaning of adjacent paved roads, and installation of wheel washers where vehicles enter and exit unpaved roads onto streets.

The projected criteria pollutant emissions resulting from construction activities were estimated by PMC using the California Emissions Estimator Model (CalEEMod). CalEEMod is a statewide land use emissions computer model designed to quantify potential criteria pollutant emissions associated with both construction and operations from a variety of land use projects. CalEEMod contains default values for much of the information needed to calculate emissions. However, project-specific, user-supplied information can also be used when it is available. Results of the modeling are included in **Appendix 3.3**.

TABLE 3.3-7
PROJECT TIER 3 CONSTRUCTION EMISSIONS (MAXIMUM 160 ACRES)

Construction Phase (based on the disturbance of 160 acres of land over a one-year period)	Ozone Precursors (ROG & NOx combined)	Diesel Particulate Matter[1]	Fugitive Particulate Matter Dust[2]
Construction Emissions – Maximum Pounds per Day	83.57	6.87	9.43
SLOAPCD Daily Significance Thresholds	**137 lbs**	**7 lbs**	**None**
Exceed Daily Thresholds?	No	No	No
Construction Emissions – Tons per Quarter[3]	1.99	0.09	0.77
SLOAPCD Quarterly Tier 1 Significance Thresholds[4]	**2.5 tons**	**0.13 tons**	**2.5 tons**
SLOAPCD Quarterly Tier 2 Significance Thresholds[4]	**6.3 tons**	**0.32 tons**	**None**
Exceed Quarterly Tier 1 or 2 Thresholds?	No	No	No

*Source: Emissions modeled by PMC using the CalEEMod computer program. Emission projections account for implementation of the SLOAPCD's Fugitive Dust Mitigation Measures: Expanded List. See **Appendix 3.3** for modeling outputs.*

[1] Diesel particulate matter accounts for both exhaust PM_{10} and exhaust $PM_{2.5}$.

[2] Fugitive particulate matter dust accounts for both fugitive PM_{10} and fugitive $PM_{2.5}$.

*[3] Annual emissions outputs presented in **Appendix 3.3** are divided by 4 in order to identify quarterly emissions.*

[4] Quarterly Tier 1 and Tier 2 Thresholds apply to construction projects lasting more than one quarter of the year (3 months). As stated in Section 2.0, Project Description, individual SEF and WECS facilities are estimated to be constructed in 6 months to a year. Additionally, this table accounts for construction activity assumed to be implemented in a one-year time span.

As shown in **Table 3.3-7**, construction emissions associated with the greatest amount of disturbance proposed for a single Tier 3 SEF project (160 acres) would not exceed SLOAPCD daily significance thresholds. However, although the largest individual Tier 3 projects may not generate significant short-term emissions, it is possible that several renewable energy projects instigated by the proposed Program would be under construction simultaneously and would generate cumulative construction emissions that could exceed thresholds and impact air

quality. Therefore, construction-related air quality impacts generated by implementation of the proposed Program are considered potentially significant. As previously stated, the SLOAPCD has developed construction mitigation measures that are designed to reduce air pollutant emissions from construction activities. According to the SLOAPCD, measures should be applied as necessary to reduce construction impacts below the significance thresholds. Construction-generated emissions from development projects that cannot be adequately mitigated with on-site mitigation measures alone would require off-site mitigation in order to reduce air quality impacts to a level of insignificance.

As previously stated, County Code Sections 22.10.030 and 22.60.050.B mandates that a copy of any development application, including future renewable energy projects under the proposed Program, be forwarded to the SLOAPCD for review. This referral is intended to enable the SLOAPCD to determine whether the proposed use exceeds the district's significance thresholds for significant air quality impacts from development projects and if mitigations are required. In the case that the SLOAPCD determines that a development could exceed construction level significance thresholds, SLOAPCD's Standard Mitigation Measures are required. These include the following requirements:

- 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 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.
- Use alternatively fueled construction equipment on-site where feasible, such as compressed natural gas (CNG), liquefied natural gas (LNG), propane, or biodiesel.

If the estimated emissions from the actual fleet for a given construction phase are expected to still exceed the SLOAPCD thresholds of significance after the Standard Mitigation Measures are factored into the estimation, then Best Available Control Technology (BACT) is required to be implemented to further reduce these impacts. The SLOAPCD BACT measures can include:

- Further reducing emissions by expanding use of Tier 3 and Tier 4[1] off-road and 2010 on-road compliant engines.
- Repowering equipment with the cleanest engines available.
- Installing California Verified Diesel Emission Control Strategies.

If the estimated construction emissions are still expected to exceed SLOAPCD thresholds of significance after the Standard Mitigation Measures and BACT measures are factored into the estimation, then a SLOAPCD-approved Construction Activity Management Plan (CAMP) and off-site mitigation are required to be implemented in order to reduce potential air quality impacts to a level of insignificance. The CAMP is required to be submitted to the SLOAPCD for review and approval prior to the start of construction and needs to include, but is not limited to, the following elements:

- A Dust Control Management Plan that encompasses all, but is not limited to, SLOAPCD dust control measures.
- Tabulation of on- and off-road construction equipment (age, horsepower, and miles and/or hours of operation).
- Schedule construction truck trips during non-peak hours to reduce peak hour emissions.
- Limit the length of the construction workday period, if necessary.
- Phase construction activities, if appropriate.

If, after all of the above is implemented and thresholds still exceeded, and off-site fee program is also available. The current off-site mitigation rate is $16,000 per ton of ozone precursor emission (NOx and ROG) over the SLOAPCD threshold calculated over the length of the expected exceedance. The applicant may use these funds to implement SLOAPCD-approved emission reduction projects near the project site or may pay that funding level plus an administration fee to the SLOAPCD to administer emission reduction projects in close proximity to the project. Examples of off-site mitigation strategies include, but are not limited to, the following:

- Fund a program to buy and scrap older heavy-duty diesel vehicles or equipment.
- Replace/repower transit buses.
- Replace/repower heavy-duty diesel school vehicles (i.e., bus, passenger, or maintenance vehicles).

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[1] NO_x emissions are primarily associated with use of diesel-powered construction equipment (e.g., graders, excavators, rubber-tired dozers, tractor/loader/backhoes). The Clean Air Act of 1990 directed the EPA to study, and regulate if warranted, the contribution of off-road internal combustion engines to urban air pollution. The first federal standards (Tier 1) for new off-road diesel engines were adopted in 1994 for engines over 50 horsepower and were phased in from 1996 to 2000. In 1996, a Statement of Principles pertaining to off-road diesel engines was signed between the EPA, CARB, and engine makers (including Caterpillar, Cummins, Deere, Detroit Diesel, Deutz, Isuzu, Komatsu, Kubota, Mitsubishi, Navistar, New Holland, Wis-Con, and Yanmar). On August 27, 1998, the EPA signed the final rule reflecting the provisions of the Statement of Principles. The 1998 regulation introduced Tier 1 standards for equipment under 50 horsepower and increasingly more stringent Tier 2 and Tier 3 standards for all equipment with phase-in schedules from 2000 to 2008. As a result, all off-road, diesel-fueled construction equipment manufactured in 2006 or later has been manufactured to Tier 3 standards.

On May 11, 2004, the EPA signed the final rule introducing Tier 4 emission standards, which are currently phased-in over the period of 2008-2015. The Tier 4 standards require that emissions of PM and NOx be further reduced by about 90 percent. All off-road, diesel-fueled construction equipment manufactured in 2015 or later will be manufactured to Tier 4 standards.

- Retrofit or repower heavy-duty construction equipment, or on-road vehicles.
- Repower or contribute to funding clean diesel locomotive main or auxiliary engines.
- Purchase verified diesel emission control systems (VDECs) for local school buses, transit buses, or construction fleets.
- Install or contribute to funding alternative fueling infrastructure (i.e., fueling stations for CNG, LPG, conductive and inductive electric vehicle charging, etc.).
- Fund expansion of existing transit services.
- Replace/repower marine diesel engines.

The SLOAPCD has developed construction mitigation measures, including off-site mitigation, which are designed to reduce air pollutant emissions from construction activities and can be applied as necessary to reduce construction impacts below the significance thresholds. This process ensures that all future renewable energy projects instigated by the proposed Program will be mitigated to levels of insignificance in terms of air quality. For these reasons, future renewable energy facilities under the proposed Program would be **less than significant (Class III)**.

Impact 3-3-1 – Policy Changes Implementation of the proposed Program could result in changes to countywide policies that could indirectly violate state or federal ambient air quality standards or exceed county air quality emission thresholds. This impact is considered **less than significant (Class III)**.

The implementation of the proposed policy changes to the General Plan would enable streamlined reviews and approvals of SEF and WECS facility projects to be achieved either through the building permit process, zoning clearance process, or site plan review process. Once operational, these facilities produce emissions-free energy with the exception of negligible emissions from worker trips and equipment usage associated with ongoing operations, maintenance, repair, and security. SEF and WECS facility projects result in a net reduction of emissions, especially when compared to other energy producers such as fossil fuel–based power plants. This would be considered a beneficial impact regionally and statewide.

As shown in **Table 3.3-7**, construction emissions associated with the greatest amount of disturbance proposed for a single Tier 3 SEF project (160 acres) would not exceed SLOAPCD daily significance thresholds. While it is possible that several renewable energy projects instigated by the proposed Program would be under construction simultaneously and would generate cumulative construction emissions that could exceed thresholds and impact air quality, the SLOAPCD has developed construction mitigation measures, including off-site mitigation, which are designed to reduce air pollutant emissions from construction activities and can be applied as necessary to reduce construction impacts below the significance thresholds. Therefore, this impact is **less than significant (Class III).**

Expose Any Sensitive Receptor to Substantial Air Pollution Concentrations (Threshold 2)

Toxic Air Contaminants

None of the actions proposed as part of the proposed Program would result in a major source of toxic air contaminant concentrations, which include industrial processes (e.g., petroleum refining and chrome-plating operations), commercial operations (e.g., gasoline stations and dry

cleaners), and substantial amounts of motor vehicle exhaust (e.g., distribution centers and warehouses). One of the benefits of solar and wind energy is that the production of electricity from these sources involves negligible emissions of air pollutants. In contrast, fossil fuel–fired electric generation from coal, oil, or natural gas results in substantial direct emissions of numerous air pollutants that have adverse impacts on public health and the environment. Electric generation from fossil fuel–fired power plants, including natural gas power plants, is a leading source of air emissions that harm human health—resulting in 22 percent of NOx emissions, 69 percent of sulfur dioxide (SO_2) emissions, and 40 percent of mercury emissions in the United States (DOE 2008), all of which are considered toxic. Other toxic pollutants emitted from fossil-fueled power plants include volatile organic compounds (e.g., benzene, dioxins) and heavy metals (e.g., arsenic, lead). Health experts have documented that pollutants from fossil-fueled power plants result in a wide range of serious health effects. These adverse health effects include lung cancer and other respiratory diseases (e.g., asthma), other carcinogenic effects, neurotoxic effects, and elevation of heart disease risks (DOE 2008). Renewable energy-generating facilities do not produce these types of toxic emissions.

Construction and Naturally Occurring Asbestos

Construction associated with implementation of solar energy and wind energy projects and decommissioning would result in the generation of diesel particulate matter emissions from the use of off-road diesel equipment required for site grading and excavation, paving, and other construction or decommissioning activities. In addition, naturally occurring asbestos (NOA), contained in serpentine and ultramafic rock, has been identified by the SLOAPCD as potentially occurring in several areas throughout the county. As previously stated, CARB has identified NOA as a toxic air contaminant, and human activities, such as construction, may disturb NOA-bearing rock or soil and release mineral fibers into the air, which pose a greater potential for human exposure by inhalation.

Construction and Valley Fever

In addition, as discussed previously, valley fever (*Coccidioidomycosis*) is found in California, including San Luis Obispo County. *Coccidioidomycosis* is commonly found within the soil in specific areas and can be stirred into the air by anything that disrupts the soil, such as farming, construction, and wind. The California Department of Public Health (2013, p. 2) considers San Luis Obispo County a highly endemic area for valley fever. When soil containing this fungus is disturbed by construction activities such as digging or grading, by vehicles raising dust, or by the wind, the fungal spores get into the air. When people breathe the spores into their lungs, they may get valley fever. Fungal spores are small particles that can grow and reproduce in the body. The highest infection period for valley fever occurs during the dry months in California between June and November (CDPH 2013, p. 2). Infection from valley fever during construction can be partially mitigated through the control of construction-generated dust.

Impact 3-3-2 – Solar/Wind Implementation of the proposed Program could result in exposure of a sensitive receptor to substantial air pollution concentrations. This is a **less than significant (Class III)** impact.

As stated, none of the actions proposed as part of the proposed Program would result in a major source of toxic air contaminant concentrations, which include industrial processes (e.g., petroleum refining and chrome-plating operations), commercial operations (e.g., gasoline stations and dry cleaners), and substantial amounts of motor vehicle exhaust (e.g., distribution centers and warehouses). One of the benefits of solar and wind energy is that the production of electricity from these sources involves negligible emissions of air pollutants.

As stated under Threshold 1, construction associated with implementation of solar and wind energy projects would result in the generation of diesel particulate matter emissions from the use of off-road diesel equipment required for site grading and excavation, paving, and other construction activities. The amount to which the receptors are exposed (a function of concentration and duration of exposure) is the primary factor used to determine health risk (i.e., potential exposure to TAC emission levels that exceed applicable standards). Health-related risks associated with diesel-exhaust emissions are primarily linked to long-term exposure and the associated risk of contracting cancer. Concentrations of mobile-source diesel particulate matter emissions are typically reduced by 70 percent at a distance of approximately 500 feet (CARB 2005).

In addition, current models and methodologies for conducting health risk assessments are associated with longer-term exposure periods of 9, 40, and 70 years, which do not correlate well with the temporary and highly variable nature of construction activities. The use of diesel-powered construction equipment associated with development of solar and wind energy generation projects would be temporary and episodic and would occur over several locations isolated from one another. Furthermore, development under the proposed Program would be subject to, and would comply with, Title 13, Section 2449(d)(3) of the California Code of Regulations (California State Heavy-Duty Vehicle Idling Emission Reduction Program), which limits idling of diesel-fueled off-road equipment to no more than 5 minutes, which would further reduce nearby sensitive receptors' exposure to temporary and variable diesel particulate matter emissions.

Furthermore, as previously stated larger development projects would be required to comply with SLOAPCD BACT measures requiring the use of Tier 3 and Tier 4 construction equipment which substantially reduce the amount of generated exhaust emissions. In addition, County Code Section 22.52.160, Construction Procedures, establishes measures to address potential impacts to sensitive receptors within 1,000 feet of most construction sites, as described under the Regulatory Setting subsection above. County Code Section 22.60.050 also calls for APCD review of site plans. For these reasons and because diesel fumes disperse rapidly over relatively short distances, diesel particulate matter generated by construction activities, in and of itself, would not be expected to create conditions where the probability of contracting cancer is greater than 10 in 1 million for nearby receptors, the statewide significance threshold (please refer to Section 3.8, Hazards and Hazardous Materials, for a discussion on potential impacts to construction workers).

As previously stated, the SLOAPCD has identified areas throughout the county where NOA may be present. Construction activities that result in the disturbance of NOA-containing soils can result in the airborne entrainment of asbestos. The California Department of Conservation's (2000) *A General Location Guide for Ultramafic Rocks in California-Areas More Likely to Contain Naturally Occurring Asbestos* identifies NOA-containing soils present exclusively in the Coastal Zone of the county, which is not affected by the proposed Program. Furthermore, County Code Section 22.52.160 addresses the potential to encounter NOA during grading by mandating that prior to any grading activities in NOA candidate areas, the project proponent must prepare a geologic evaluation to determine whether NOA is present within the area that will be disturbed.

If NOA is not present, an exemption request must be filed with the SLOAPCD. If NOA is found, the project applicant would be required to comply with the requirements listed in CARB's Asbestos Air Toxics Control Measure (ATCM) for Construction, Grading, Quarrying, and Surface Mining Operations. These CARB requirements mandate that all construction occurring in an area with NOA-containing soils prepare and submit an Asbestos Dust Mitigation Plan for approval by the local air district. The Asbestos Dust Mitigation Plan must identify asbestos dust mitigation measures that would include, but would not be limited to, the following (CARB 2008):

- Construction vehicle speed at the work site must be limited to 15 miles per hour or less.
- Prior to any ground disturbance, sufficient water must be applied to the area to be disturbed to prevent visible emissions from crossing the property line.
- Areas to be graded or excavated must be kept adequately wetted to prevent visible emissions from crossing the property line.
- Storage piles must be kept adequately wetted, treated with a chemical dust suppressant, or covered when material is not being added to or removed from the pile.
- Equipment must be washed down before moving from the property onto a paved public road.
- Visible track-out on the paved public road must be cleaned using wet sweeping or a HEPA filter equipped vacuum device within 24 hours.

For these reasons, potential impacts from NOA would be less than significant.

As discussed previously, valley fever (*Coccidioidomycosis*) is found in California, including San Luis Obispo County. In about 50 to 75 percent of people, valley fever causes either no symptoms or mild symptoms and those infected never seek medical care; when symptoms are more pronounced, they usually present as lung problems (cough, shortness of breath, sputum production, fever, and chest pains). The disease can progress to chronic or progressive lung disease and may even become disseminated to the skin, lining tissue of the brain (meninges), skeleton, and other body areas.

The California Department of Public Health (2013, p. 2) considers San Luis Obispo County a highly endemic area for valley fever. When soil containing this fungus is disturbed by construction activities such as digging or grading, by vehicles raising dust, or by the wind, the fungal spores get into the air. When people breathe the spores into their lungs, they may get valley fever. Fungal spores are small particles that can grow and reproduce in the body. The highest infection period for valley fever occurs during the dry months in California between June and November (CDPH 2013, p. 2).

Infection from valley fever during construction can be partially mitigated through the control of construction-generated dust. As noted, construction-generated dust would be controlled by adhering to the mandatory requirements of the SLOAPCD Fugitive Dust Mitigation Measures. In addition, the California Department of Public Health provides recommendations for reducing the potential for valley fever infection during construction activities. These measures are identified under Impact 3-8-2 of Section 3.8, Hazards and Hazardous Materials.

This impact is **less than significant (Class III).**

Impact 3-3-2 – Policy Changes Implementation of the proposed Program could result in changes to countywide policies and could result in the exposure of a sensitive receptor to substantial air pollution concentrations. This impact is **less than significant (Class III)**.

The implementation of the proposed policy changes to the General Plan would enable streamlined reviews and approvals of eligible SEF and WECS projects to be achieved either through the building permit process, zoning clearance process, or site plan review process. As discussed above in Impact 3-3-2 – Solar/Wind, although there are pollutant emissions associated with implementation of the Program, they would not be significant. Associated county policy

changes would be updated for consistency with the objectives of this streamlining effort. Therefore, impacts are **less than significant (Class III).**

Create or Subject Individuals to Objectionable Odors (Threshold 3)

The occurrence and severity of odor impacts depends on numerous factors, including the nature, frequency, and intensity of the source; wind speed and direction; and the sensitivity of the receptors. While offensive odors rarely cause any physical harm, they can be unpleasant, leading to considerable distress among the public and often generating citizen complaints to local governments and regulatory agencies. Projects with the potential to frequently expose members of the public to objectionable odors would be deemed to have a significant impact.

Impact 3-3-3 – Solar/Wind Implementation of proposed solar and wind energy facilities could result in projects that would include sources of odors which could affect surrounding land uses. This impact is **less than significant (Class III)**.

The development allowed under the proposed Program would not result in the installation of any equipment or processes that would be considered major odor emission sources. However, activities associated with construction activities would involve the use of a variety of gasoline- or diesel-powered equipment that would emit exhaust fumes. While exhaust fumes, particularly diesel exhaust, may be considered objectionable by some people, construction-generated emissions would occur intermittently throughout the workday and would dissipate rapidly with increasing distance from the source. The construction phase is a short-term condition lasting a week to a year depending on the size of the facility. In addition, County Code Section 22.52.160, Construction Procedures, establishes measures to address potential impacts to sensitive receptors within 1,000 feet of most construction sites, as described under the Regulatory Setting subsection above. As a result, potential exposure of sensitive receptors to odors associated with proposed Program would be considered **less than significant (Class III).**

Impact 3-3-3 – Policy Changes Implementation of the proposed Program could result in changes to countywide policies and could result in projects that would include substantial or long-term sources of odors which could affect surrounding land uses. This is a **less than significant (Class III)** impact.

The implementation of the proposed policy changes to the General Plan would enable streamlined reviews and approvals of SEF and WECS facility projects to be achieved either through the building permit process, zoning clearance process, or site plan review process. These facilities would not require any equipment or processes that would be considered major odor emission sources. This impact is **less than significant (Class III)**.

Be Inconsistent with the District's Clean Air Plan (Threshold 4)

The SLOAPCD adopted the Clean Air Plan in January 1992; the plan was updated in 1998 and again in 2001. The Clean Air Plan is a comprehensive planning document designed to reduce emissions from traditional industrial and commercial sources, as well as from motor vehicle use. The plan's purpose is to address the attainment and maintenance of state and federal ambient air quality standards by following a comprehensive set of emission control measures within the Clean Air Plan.

Compliance with the Clean Air Plan helps to ensure that long-term trends in air quality improvements are not disrupted. The plan contains measures that local governments can implement so land use or transportation decisions do not contribute to urban sprawl or increased dependence on automobile use. According to SLOAPCD (2012), a project would conflict with or obstruct implementation of the Clean Air Plan if the proposed Program is inconsistent with the land use and transportation control measures and strategies outlined in the plan. If the project does not conflict or inhibit these measures, the project is considered consistent with the Clean Air Plan.

Impact 3-3-4 – Solar/Wind Implementation of proposed solar and wind energy facilities could conflict with the SLOAPCD 2001 Clean Air Plan. This is a **less than significant (Class III)** impact.

Air pollutants emitted into the ambient air of the county are emitted primarily by mobile sources (traffic) during construction and operational activities. As stated under Threshold 1, while there would be some air pollutant emissions generated during the operations of renewable energy facilities from worker trips and equipment usage associated with ongoing operations, maintenance, repair, and security, such emissions would be negligible. This is because it is likely that up to 3 personnel would be required to service and maintain each Tier 1 SEF, Tier 2 SEF, and Tier 3 SEF facility, which represents a level of activity that would result in negligible air pollutant emissions.

As also stated under Threshold 1, the SLOAPCD has developed construction mitigation measures, including off-site mitigation, which are designed to reduce air pollutant emissions from construction activities and associated construction worker commutes (for a Tier 3 SEF project, construction personnel would average approximately 40 personnel, and Tier 1 and Tier 2 SEF projects would average fewer personnel depending on the construction schedule and phasing) and can be applied as necessary to reduce construction impacts below the significance thresholds. For these reasons, future construction of renewable energy facilities under the proposed Program would be less than significant in terms of air quality. In addition, the renewable energy-generating facilities allowed under the proposed Program produce energy that is largely emissions-free. One of the obvious benefits of solar and wind energy is that the production of electricity from these sources involves almost no direct air pollutant emissions, with the exception of negligible emissions from worker trips and equipment usage associated with ongoing operations, maintenance, repair, and security. By nature, these facilities do not produce air pollutant emissions; regionally speaking, they reduce emissions by decreasing the need for energy from fossil fuel–based power plants, which is considered a beneficial impact.

For these reasons the proposed Program would not conflict with or inhibit the Clean Air Plan measures that address state and federal ambient air quality standards. Additionally, **Table 3.3-8** presents a comparison of the proposed Program (SEF facilities and wind energy conversion systems) to the specific Clean Air Plan policy provisions intended to address air quality standards. As shown in **Table 3.3-8**, the proposed Program would not conflict with the SLOAPCD Clean Air Plan.

TABLE 3.3-8
PROPOSED PROGRAM COMPARISON WITH CLEAN AIR PLAN POLICIES

Clean Air Plan Policies (Policy Reference)	Proposed Program
Campus Trip Reduction Program: This control measure requires the development of individual programs tailored to meet the trip reduction needs of the California Polytechnic State University, San Luis Obispo (Cal Poly) and Cuesta College campuses.	Not applicable.
Voluntary Commute Options Program: 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.	Not applicable. While construction-related traffic would include worker vehicles and trucks delivering materials and supplies to the specific renewable energy project site, construction of SEF and WECS facilities would vary in size resulting in a maximum 40 construction personnel during a Tier 3 SEF project (Tier 1 and Tier 2 SEF projects would average fewer personnel depending on the construction schedule and phasing). This limited amount of additional traffic would not result in significant impacts on local roadways and furthermore would be temporary and cease once construction is complete. Similarly, ongoing operations and maintenance of SEF and WECS facilities would require worker commutes and deliveries of supplies. However, given the small number of traffic trips generated by operations of solar energy projects, the associated negligible increase in trips on local roadways and highways would not adversely impact the local transportation system or otherwise degrade traffic facility operations.
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.	Not applicable. While construction-related traffic would include worker vehicles and trucks delivering materials and supplies to the specific renewable energy project site, construction of SEF and WECS facilities would vary in size resulting in a maximum 40 construction personnel during a Tier 3 SEF project and fewer for all other renewable energy projects. This limited amount of additional traffic would not result in significant impacts on local roadways and furthermore would be temporary and cease once construction is complete. Similarly, ongoing operations and maintenance of SEF and WECS facilities would require worker commutes and deliveries of supplies. However, given the small number of traffic trips generated by operations of renewable energy projects, the associated negligible increase in trips on local roadways and highways would not adversely impact the local transportation system or otherwise degrade traffic facility operations.
Regional Public Transit Improvements: The focus of this measure is on service and facility improvements for commuters, including intercity rail improvements as a trip reduction strategy.	Not applicable. While construction-related traffic would include worker vehicles and trucks delivering materials and supplies to the specific renewable energy project site, construction of SEF and WECS facilities would vary in size resulting in a maximum 40 construction personnel during a Tier 3 SEF project and fewer for all other renewable energy projects. This limited amount of additional traffic would not result in significant impacts on local roadways and furthermore would be temporary and cease once construction is complete. Similarly, ongoing operations and maintenance of SEF and WECS facilities would require worker commutes and deliveries of supplies. However, given the small number of traffic trips generated by operations of renewable energy projects, the associated negligible increase in trips on local roadways and highways would not adversely impact the local transportation system or otherwise degrade traffic facility operations.

Clean Air Plan Policies (Policy Reference)	Proposed Program
Bicycling and Bikeway Enhancements: The goal of this measure is to achieve a countywide average bicycle modal share of 5 percent.	Not applicable. While construction-related traffic would include worker vehicles and trucks delivering materials and supplies to the specific renewable energy project site, construction of SEF and WECS facilities would vary in size resulting in a maximum 40 construction personnel during a Tier 3 SEF project and fewer for all other renewable energy projects. This limited amount of additional traffic would not result in significant impacts on local roadways and furthermore would be temporary and cease once construction is complete. Similarly, ongoing operations and maintenance of SEF and WECS facilities would require worker commutes and deliveries of supplies. However, given the small number of traffic trips generated by operations of renewable energy projects, the associated negligible increase in trips on local roadways and highways would not adversely impact the local transportation system or otherwise degrade traffic facility operations.
Park & Ride Lots: 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.	Not applicable. While construction-related traffic would include worker vehicles and trucks delivering materials and supplies to the specific renewable energy project site, construction of SEF and WECS facilities would vary in size resulting in a maximum 40 construction personnel during a Tier 3 SEF project and fewer for all other renewable energy projects. This limited amount of additional traffic would not result in significant impacts on local roadways and furthermore would be temporary and cease once construction is complete. Similarly, ongoing operations and maintenance of SEF and WECS facilities would require worker commutes and deliveries of supplies. However, given the small number of traffic trips generated by operations of solar energy projects, the associated negligible increase in trips on local roadways and highways would not adversely impact the local transportation system or otherwise degrade traffic facility operations.
Motor Vehicle Inspection and Control Programs: 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.	Not applicable.
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 (SLOAPCD 2012). Ongoing operations and maintenance of SEF and WECS facilities would require worker commutes and deliveries of supplies; however, transportation activities during operations would be limited to a small number of trips by personal vehicles and a few truck shipments. Given the small number of traffic trips generated by operations of solar energy projects, the associated negligible increase in trips on local roadways and highways would not adversely impact the local transportation system or otherwise degrade traffic facility operations. While construction-related traffic would include worker vehicles and trucks delivering materials and supplies to the specific renewable energy project site, increases of traffic due to construction would be temporary and cease once construction is complete.
Teleworking, 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. Telecommuting is usually accomplished with a computer and modem, and allows the worker to be "connected" to the	Not applicable.

Clean Air Plan Policies (Policy Reference)	Proposed Program
worksite in order to access files and receive and send e-mail. Video services available at the worksite or at a teleconferencing center can reduce the need for business-related travel.	
Planning Compact Communities: The objective of this measure is to regulate growth to densities that reduce trips, travel distances, and encourage the use of alternative forms of transportation, restrict urban growth within the urban reserve lines of cities and unincorporated communities, and maintained rural areas of the county as open space, agricultural lands and very low density residential development (20 acre or larger parcel size).	The proposed project would not introduce a new land use or substantial population or employment growth; therefore, the project would not be likely to contribute to urban sprawl or increased dependence on automobile use. While rural areas of the county could potentially be developed with SEFs, these facilities would not be located in urban areas and eventually would be decommissioned. Decommissioning of facilities would involve removal of all aboveground facilities and gravel work pads and roads. While ongoing operations and maintenance of SEF and WECS facilities would require worker commutes and deliveries of supplies, given the small number of traffic trips generated by operations of solar energy projects, the associated negligible increase in trips on local roadways and highways would not adversely affect planned compact communities.
Providing for Mixed Land Use: The mixing of compatible commercial and residential land uses should be encouraged when it will reduce dependence on the automobile or improve the balance between jobs and housing without creating incompatible land use relationships.	Not applicable.
Balancing Jobs and Housing: Within cities and unincorporated communities, the gap between the availability of jobs and housing should be narrowed and should not be allowed to expand.	Not applicable. The project does not include a residential component that would directly induce new population growth. In fact, during construction of the SEFs and WECS facilities associated with implementation of the RESP, short-term employment could result in a beneficial impact on the local economy due to an increase in demand for products, services, and supplies found in the county.
Circulation Management: The primary goal of the recommended Circulation Management Policies and Programs is to encourage the design and construction of the county's transportation system in a manner that supports alternative travel modes and decreases reliance on single occupant motor vehicles. To this end, improving accessibility for all travelers, not just drivers, is the primary transportation objective.	Not applicable. While ongoing operations and maintenance of SEF and WECS facilities would require worker commutes and deliveries of supplies, given the small number of traffic trips generated by operations of solar energy projects, the associated negligible increase in trips on local roadways and highways would not adversely affect planned compact communities.
Communication, Coordination, and Monitoring: Local jurisdictions, the APCD and the Council of Governments should coordinate actions and cooperate in pursuing the implementation of the land use and circulation management programs proposed in this document. The countywide Congestion Management Plan, the Clean Air Plan, and local General Plans should be used as a means to achieve coordinated implementation of these programs.	Not applicable.

As stated, construction of SEF and WECS facilities would vary in size; however, the maximum size and magnitude of projects permitted under the RESP (160-acre SEFs maximum) would not result in significant impacts on local roadways. Furthermore, given the small number of traffic trips generated by operations of solar energy projects, the associated negligible increase in trips on

local roadways and highways would not adversely impact the local transportation system or otherwise degrade traffic operations, and thus would not result in the generation of a substantial amount of mobile source air pollutants. Additionally, solar and wind energy facilities produce emissions-free energy and by their nature do not produce air pollutant emissions. Instead they reduce emissions by decreasing the need for energy from fossil fuel–based power plants, which is considered a beneficial impact regionally and statewide. Also, as shown in **Table 3.3-8,** no aspect of the proposed Program would conflict with the specific policy provisions contained in the SLOAPCD 2001 Clean Air Plan. This is a **less than significant (Class III)** impact**.**

Impact 3-3-4 – Policy Changes Implementation of the proposed Program could result in changes to countywide policies that could indirectly conflict with the SLOAPCD 2001 Clean Air Plan. This is a **less than significant (Class III)** impact.

The implementation of the proposed policy changes to the General Plan would enable streamlined reviews and approvals of SEF and WECS facility projects to be achieved either through the building permit process, zoning clearance process, or site plan review process. These facilities produce energy that is largely emissions-free and by their nature do not produce air pollutant emissions. Instead they reduce emissions by decreasing the need for energy from fossil fuel–based power plants, which is considered a beneficial impact regionally and statewide. Therefore, the proposed Program would not conflict with the SLOAPCD 2001 Clean Air Plan, which is intended to address state and federal air quality standards and ensure that long-term trends in air quality improvements are not disrupted. This is a **less than (Class III)** impact.

CUMULATIVE IMPACTS

The cumulative setting for air quality is the SCCAB, which includes San Luis Obispo, Santa Barbara, and Ventura counties. As stated under Threshold 1, while there would be some air pollutant emissions generated during the operation of renewable energy facilities from worker trips and equipment usage associated with ongoing operations, maintenance, repair, and security, such emissions would be negligible. This is because it is likely that up to 3 personnel would be required to service and maintain each Tier 1 SEF, Tier 2 SEF, and Tier 3 SEF facility, which represents a level of activity that would result in negligible air pollutant emissions. As also stated under Threshold 1, County Code Sections 22.10.030 and 22.60.050 mandates that a copy of any development application be forwarded to the SLOAPCD for review with the intent to enable the SLOAPCD to determine whether the proposed construction exceeds the district's significance thresholds and provide a basis for the type mitigation measures to apply.

The SLOAPCD has developed construction mitigation measures, including off-site mitigation, which are designed to reduce air pollutant emissions from construction activities and associated construction worker commutes (for a Tier 3 SEF project, construction personnel would average approximately 40 personnel, and Tier 1 and Tier 2 SEF projects would average fewer personnel depending on the construction schedule and phasing) and can be applied as necessary to reduce construction impacts below the significance thresholds. For these reasons, future construction of renewable energy facilities under the proposed Program would be less than significant in terms of air quality.

The SLOAPCD's approach to evaluating cumulative air quality impacts is project consistency with the SLOAPCD 2001 Clean Air Plan. As identified under Threshold 4, no aspect of the proposed Program would conflict with the specific policy provisions contained in the SLOAPCD 2001 Clean Air Plan. As a result, the project would be considered to be less than cumulatively considerable.

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3.4 Biological Resources

San Luis Obispo County supports a wide range of important and sensitive species and habitat types. Renewable energy projects located in areas supporting sensitive biological resources could result in impacts to biological resources. This section outlines the existing biological resource setting in the county and related state and federal regulatory framework and evaluates the proposed Program for biological resource impacts.

3.4.1 PHYSICAL SETTING

The following discussion begins with a general county overview of the biological setting and then provides more specific information within each of the four planning areas considered under the Renewable Energy Streamlining Program (RESP or Program). Native vegetation, special-status species (including designated critical habitat), migration and wildlife movement, jurisdictional resources, and other biological considerations are described for each planning area. The Coastal Zone Planning Area is excluded from consideration in the Program and therefore is not described.

GIS datasets were used to develop the environmental setting for the Program and were obtained from various sources including the California Department of Fish and Wildlife (CDFW), County of San Luis Obispo, US Fish and Wildlife Service (USFWS), US Geological Survey (USGS), and others.

BIOLOGICAL RESOURCES IN SAN LUIS OBISPO COUNTY

The county is rich with native habitats, undeveloped open space, and rural areas that support diverse biological resources. The following paragraphs introduce the resources highlighted in this analysis.

Vegetation and Habitats

San Luis Obispo County supports a wide variety of vegetation and habitats, from desert scrub to coastal sage scrub; oak woodlands to redwood forests; agriculture, grasslands, and developed lands to riparian woodlands, marshes, lakes, and rivers. Vegetation data presented in this analysis are from the USGS GAP Land Cover Data Set, which incorporates the NatureServe Ecological System classification system to represent natural and semi-natural land cover (USGS 2011). **Figure 3.4-1** illustrates the distribution of vegetation and habitats in the county.

Special-Status Species and Critical Habitat

Over 50 species listed under the federal or California Endangered Species Acts (ESA or CESA, respectively) are recorded in or have the potential to occur in San Luis Obispo County. A few of the more recognized wildlife species include Morro shoulderband snail, vernal pool fairy shrimp, San Joaquin kit fox, Nelson's antelope squirrel, giant kangaroo rat, blunt-nosed leopard lizard, California tiger salamander, and California condor.. In addition to these listed species, many other plants and animals in the county are recognized by the CDFW or the USFWS as candidates for listing, species of special concern, or with other special-status conservation designations. As a general rule, conservation of listed threatened and endangered species takes highest priority and will conserve habitats and other resources for many lower-priority special-status species. Therefore, listed species and designated critical habitat are used in this analysis as a proxy for all special-status species.

Critical habitat is a federal designation to provide essential habitat for listed species. It comprises one or more areas essential for the conservation of a species listed as threatened or endangered

under the ESA. It often includes areas that are not occupied by the species for which it was designated, but that provide specific functions (e.g., biological connectivity, dispersal areas) necessary for the species' recovery. Critical habitat may be designated for a single species or a group of species. **Figure 3.4-2** identifies designated critical habitat in San Luis Obispo County.

Migration and Wildlife Movement

Migratory pathways are routes used by species during migration, particularly in the fall and spring. Bird and bat migratory pathways often span thousands of miles and follow specific topographic features such as canyons and mountain ranges. In topographically open areas, migratory pathways may be broad and less concentrated. Riparian and wetland areas, annual grasslands, and fallow agricultural fields are particularly important as foraging and stopover sites for migrating and wintering birds in San Luis Obispo County.

In addition to seasonal migration movement, wildlife populations must have access to suitable habitat areas throughout their ranges to make use of available resources and maintain self-sustaining population levels. Land use changes for urban and agricultural uses, and linear developments such as freeways, tend to partially isolate large habitat areas from one another. Wildlife corridors facilitate movement between habitat areas that would otherwise be isolated. These corridors include habitat linkages among natural areas, greenbelts, and refuge systems. They can divert wildlife across permanent physical barriers to aid dispersal (e.g., underpasses and ramps that help wildlife cross highways and dams). Several benefits of wildlife corridors, including the promotion of species richness and diversity, decreased probability of extinction, maintenance of genetic variation, increased mix of habitat and successional stages, and alternative refugia from large disturbances.

Figure 3.4-3 presents data identifying some important areas for migration and wildlife movement in the county. Suitable stopover habitat is critical for migrating birds to provide food, water, and refugia. Important Bird Areas are identified by Audubon California (2008) as critical terrestrial and inland water habitats for birds, particularly habitat that supports rare, threatened, or endangered birds or exceptionally large congregations of shorebirds or waterfowl; these areas are conservation priorities. A number of Important Bird Areas have been identified in the county and are shown on **Figure 3.4-3**.

The Missing Linkages collaboration process identified linkages that are important to maintain or reinstate habitat connectivity throughout California. Linkages in this dataset include large, regional connections between habitat blocks meant to facilitate animal movement and other essential functions; narrow, impacted, or otherwise tenuous linkages connecting two or more habitat blocks; and highly impacted linkages that currently provide little to no connectivity function (due to intervening development, roadways, etc.) but based on location are considered critical to restoring connectivity function.

Essential Habitat Connectivity Areas and Natural Landscape Blocks were identified in the *California Essential Habitat Connectivity Project* (Spencer et al. 2010). Natural Landscape Blocks are large, relatively natural habitat blocks that support native biodiversity; Essential Connectivity Areas are essential for ecological connectivity between them.

Both the Missing Linkages and the California Essential Habitat Connectivity projects were developed at coarse scale and are focused on ecological integrity. The areas identified are broad-scale regional connectivity areas, and site-specific land uses within these areas may or may not significantly interfere with habitat connectivity.

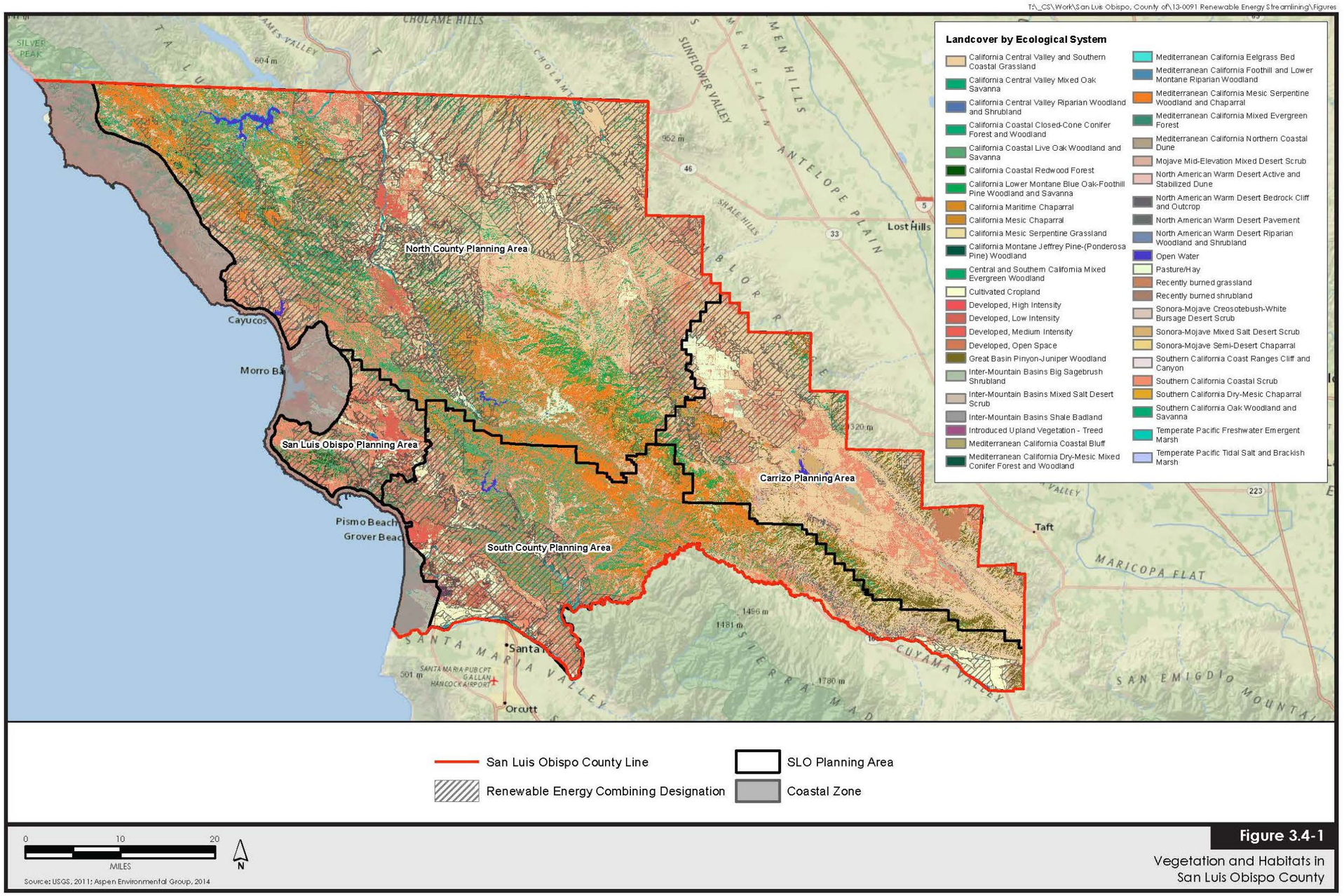

Figure 3.4-1
Vegetation and Habitats in San Luis Obispo County

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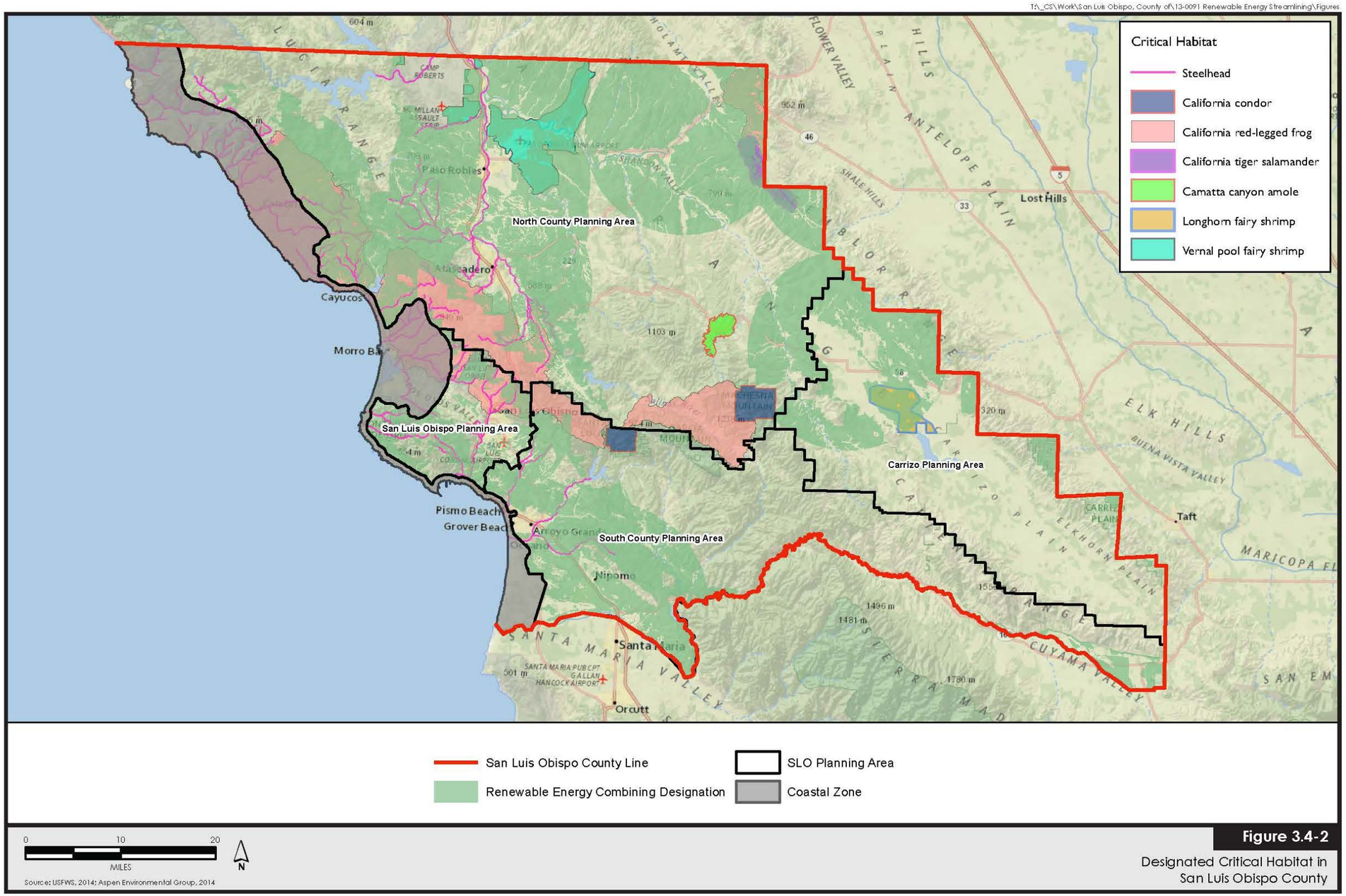

Figure 3.4-2
Designated Critical Habitat in San Luis Obispo County

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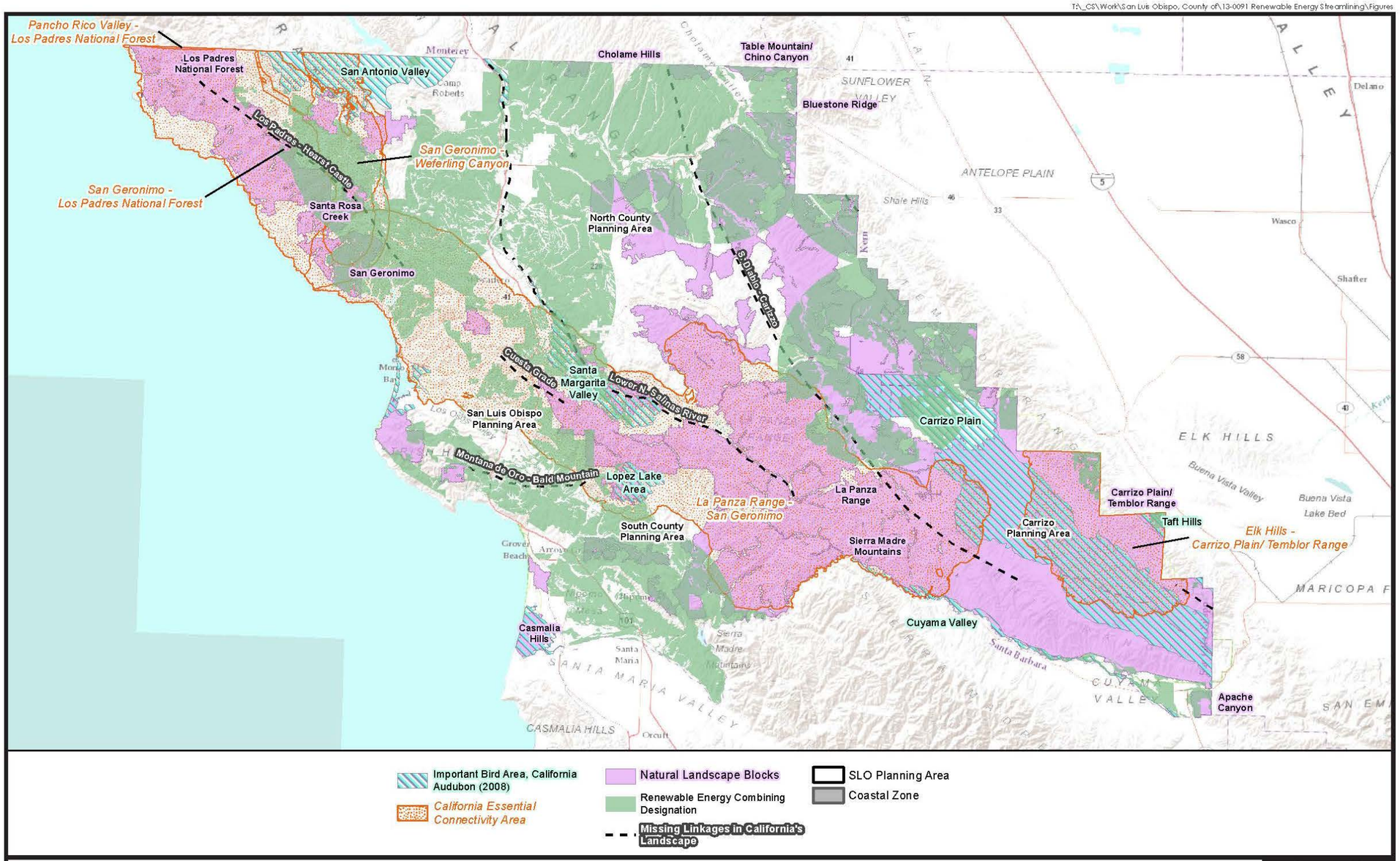

Figure 3.4-3

Migration and Wildlife Movement in San Luis Obispo County

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Jurisdictional Resources and Other Biological Considerations

Jurisdictional resources include wetlands, lakes, rivers, streams, and other waterways and drainage channels that convey water either seasonally or year-round, meeting the jurisdictional criteria as waters of the United States, waters of the State, or both. These resources are widespread throughout the county. Major resources include lakes and reservoirs, rivers, vernal pool complexes, and marshes. **Figure 3.4-4** identifies the locations of the following jurisdictional resources and other sensitive biological resources that are limited in distribution and support suites of rare and endemic species.

- Named streams, rivers, and water bodies (USGS National Hydrography Dataset) – Note that only named features are shown to identify the major jurisdictional resources, but potentially jurisdictional resources occur throughout the county and are too abundant to detail at this level of analysis. Individual project-level analysis would be conducted to identify jurisdictional resources on a particular site.
- Vernal pool habitats (CDFW data) – Vernal pools often, but not always, meet jurisdictional criteria as waters of the United States or waters of the State. Even where vernal pools are not jurisdictional, they often support rare or listed plants and invertebrates. Therefore, these habitats, regardless of jurisdictional status, are important biological resources.
- Serpentine soils (San Luis Obispo County data) – Serpentine soils are another important consideration for biological resources. These soils, developed from ultramafic bedrock material, are high in certain metals and present an unusual habitat for plants. A suite of rare plants in the county are found only on serpentine soils.

CARRIZO PLANNING AREA

The Carrizo Planning Area is in the southeastern portion of San Luis Obispo County. It is primarily agricultural, rural, and open space. The majority of the planning area is within the Carrizo Plain National Monument; there are additional lands outside of the monument that are under state and federal ownership. The portions under County jurisdiction are in the northern portion and some areas along the eastern county border. The following descriptions reflect conditions in the portions of the Carrizo Planning Area under County jurisdiction.

Vegetation and Habitats

The easternmost portions of the planning area are primarily coastal sage scrub and grasslands. The north-central portion of the planning area mainly consists of open grasslands and agricultural fields. Chaparral and oak-pine woodlands are prevalent in the western portion of the planning area.

Predominant vegetation and habitat types in the Carrizo Planning Area include the following (data and descriptions from USGS 2011):

- **Pasture/Hay.** Areas of grasses, legumes, or grass-legume mixtures planted for livestock grazing or the production of seed or hay crops, typically on a perennial cycle. Pasture/hay habitat accounts for greater than 20 percent of total land cover.
- **Cultivated Cropland.** Areas used for the production of annual crops, such as corn, soybeans, vegetables, tobacco, and cotton, and also perennial woody crops such as orchards and vineyards. Crop vegetation accounts for greater than 20 percent of total land cover. This class also includes all land being actively tilled.

- **California Central Valley and Southern Coastal Grassland.** This vegetation is found from 10 to 1,200 meters (30–3,600 feet) elevation; receiving on average 50 centimeters or approximately 20 inches of precipitation per year (range 25–100 cm, or approximately 10–39 inches), mainly as winter rain. It is found with fine-textured soils, moist or even waterlogged in winter, but very dry in summer. These grasslands are common among oak savanna and woodland and probably experience similar frequent fire regimes. Characteristic plant species include purple needlegrass, threeawn, boreal yarrow, blow-wives, annual goat-chicory, common golden star, prettyface, wavy leaf soap-plant, winecup fairy fan, tall mountain shooting star, blue wild rye, beardless lyme grass, California fescue, California melic grass, attenuate Indian-paintbrush, and curly bluegrass. Annual grasses and herbs such as wild oats, foxtail, brome grasses, wild mustards, and star thistles are common and often abundant throughout the grasslands.
- **Southern California Coastal Scrub.** This mixed coastal shrubland occurs from Central California south into Baja California Norte, Mexico. It is composed of drought-deciduous shrubs such as California sagebrush, black sage, white sage, purple sage, California brittlebush, and California wild buckwheat. Fire-tolerant evergreen shrubs, laurel sumac, lemonade sumac, and holly leaf buckthorn are also present. Recent increases in the number of fires have converted many of these shrublands to non-native annual grasslands. The abundance of fire-tolerant shrubs and coastal prickly-pear has increased in many areas.
- **Inter-Mountain Basins Big Sagebrush Shrubland.** Big sagebrush shrublands are one of the most widespread vegetation types in the western United States, found in broad basins between mountain ranges, on plains, and in foothills between 1,500 and 2,300 meters (between approximately 4,920 and 7,550 feet) elevation. The soils are deep, well-drained, and not salty. The most important sagebrush species is Wyoming or basin big sagebrush; other common shrubs include bitterbrush, rabbitbrush, and mountain snowberry. Shrubs dominate the vegetation, with grasses making up less than 25 percent of the cover. In recent years, this vegetation has been invaded by non-native annual grasses or weeds, in particular cheatgrass, which accelerates the frequency of fire, causing type-conversion to non-native annual grassland.
- **Sonora-Mojave Mixed Salt Desert Scrub.** This warm desert scrub forms extensive open-canopied shrublands in salty soil basins in the Mojave and Sonoran deserts, arid parts of the San Joaquin Valley, and the Carrizo Plain. It is often found around playas (dry lakes) that occasionally fill following rain. Soils are generally fine-textured clays and silts. Common shrubs are fourwing saltbush, cattle-spinach, or other saltbushes. Allenrolfea, pickleweed, seepweed, or other salt-loving plants are often present. The grasses alkali sacaton and saltgrass may be present at varying densities.

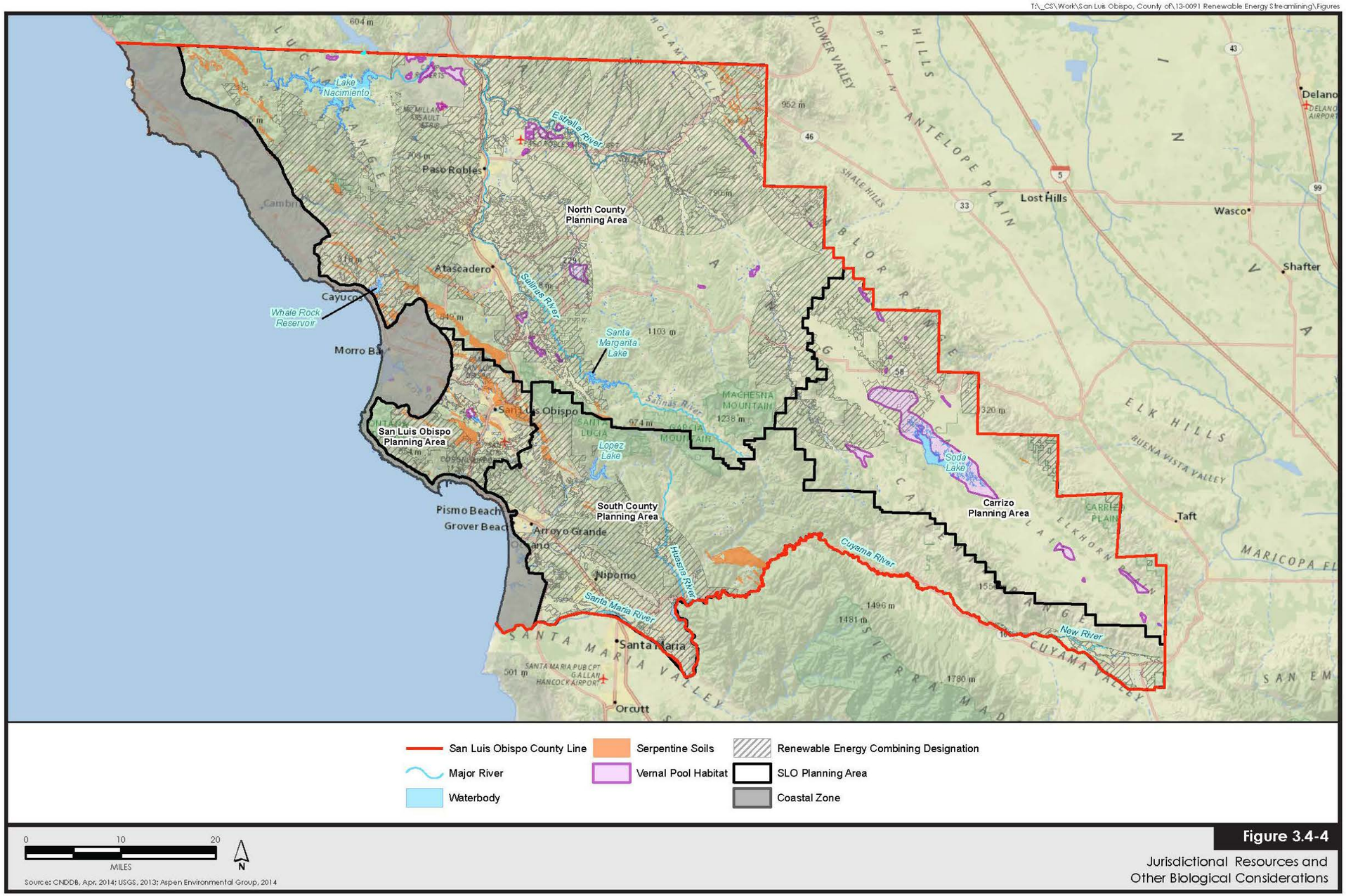

Figure 3.4-4

Jurisdictional Resources and Other Biological Considerations

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- **Mediterranean California Mesic Serpentine Woodland and Chaparral**. This vegetation occurs in the north and south Coast Ranges and the northern Sierra Nevada, on cool northerly and concave slopes and toeslopes with thin, rocky, ultramafic (gabbro, peridotite, serpentinite) soils. These shrublands and woodlands are highly variable and spotty in distribution, and the composition of individual stands can be very diverse, especially the shrubs (often individual species have low cover). Sargent cypress, gray pine, interior silk tassel, leather oak, California laurel, and hoary coffeeberry are characteristic. Common associates include toyon, chamise, and the California endemics sticky whiteleaf manzanita and Jepson ceanothus. In some settings, big berry manzanita, California snowdrop bush, or mountain mahogany can be common. Occasionally, Port Orford cedar may be present. Common grasses and forbs can include Torrey melic, blue fescue, iris, and locally endemic serpentine forbs (*Senecio* spp. and others). Structurally, this vegetation is sometimes woodland in character, but it can also be an arborescent chaparral, depending on fire history.

- **California Lower Montane Blue Oak-Foothill Pine Woodland and Savanna.** This is an open pine-oak woodland of the valley margins and foothills of the Sierra Nevada and Coast Ranges of California, ranging from approximately 120 to 1,200 meters (360–3,600 feet) elevation on rolling plains and dry slopes. High-quality stands are open and park-like foothill pine, typically including blue oak, interior live oak, coast live oak, valley oak, California buckeye, manzanita, redbud, buckbrush, California coffeeberry, oak woods gooseberry, California juniper, or Coulter pine. Foothill pine tends to drop out all together in the driest and more southerly sites, which are then dominated by blue oak. Foothill pine density varies based on intensity or frequency of fire, being less abundant in areas of higher intensity or frequency fires; hence, it is often more abundant on steep, rocky, or more mesic north-facing slope exposures.

- **Southern California Dry-Mesic Chaparral.** This vegetation includes chaparral from sea level up to 1,500 meters (4,920 feet) elevation throughout Central and Southern California and inland portions of Baja California Norte, Mexico. It is found in semi-moist to moist site conditions. Santa Ana winds drive late-summer, stand-replacing fires in these habitats. Characteristic species include bigpod ceanothus, hoaryleaf ceanothus, chaparral whitethorn, Mojave Desert whitethorn, common chamise, redshank, big berry manzanita, birchleaf mountain-mahogany, smooth mountain-mahogany, sugar bush, and mission manzanita.

- **Great Basin Pinyon-Juniper Woodland.** These woodlands occur on dry mountain ranges of the Great Basin region and eastern foothills of the Sierra Nevada and in scattered locations of western California, including the Carrizo Plain. They are found on warm, dry sites on mountain slopes, mesas, plateaus, and ridges, above the valleys where sagebrush is dominant. Severe weather during the growing season, such as frosts and drought, are thought to limit the distribution of pinyon-juniper woodlands to a relatively narrow altitudinal zone. Singleleaf pinyon and California juniper, alone or mixed together, are the main trees. Shrubs and grasses may be abundant to absent all together. Typical species include manzanita, sagebrush, blackbrush, turbinella live oak, needle-and-thread grass, Idaho fescue, blue bunch wheatgrass, great basin lyme grass, and mutton grass.

Special-Status Species and Critical Habitat

The variety of native habitats in the Carrizo Planning Area, including chaparral, oak woodlands, desert scrub, and grasslands, may support several special-status species including, but not limited to, the following (CDFW 2014a):

- Longhorn fairy shrimp (*Branchinecta longiantenna*)
- Vernal pool fairy shrimp (*B. lynchi*)
- Kern primrose sphinx moth (*Euproserpinus euterpe*)
- Blunt-nosed leopard lizard (*Gambelia sila*)
- California tiger salamander (*Ambystoma californiense*)
- California condor (*Gymnogyps californianus*)
- San Joaquin kit fox (*Vulpes macrotis mutica*)
- Giant kangaroo rat (*Dipodomys ingens*)
- Tipton kangaroo rat (*D. nitratoides nitratoides*)
- California jewelflower (*Caulanthus californicus*)
- Kern mallow (*Eremalche kernensis*)
- San Joaquin woollythreads (*Monolopia congdonii*)

The only designated critical habitat in the portion of the Carrizo Planning Area under County jurisdiction is for the longhorn fairy shrimp, which is found in vernal pools. One area is designated for this species in the north-central portion of the planning area.

Migration and Wildlife Movement

A portion of the South Diablo-Carrizo linkage traverses the western portion of the planning area under County jurisdiction. This linkage is described in more detail under the North County Planning Area. Most of the Carrizo Planning Area, including the lands under County jurisdiction, is mapped as Essential Habitat Connectivity Areas or Natural Landscape Blocks associated with the La Panza Range, the Carrizo Plain, and the Temblor Range.

The entire Carrizo Plain is an Important Bird Area, and the Taft Hills Important Bird Area straddles the border between San Luis Obispo County and Kern County to the east (Audubon California 2008).

Jurisdictional Resources and Other Biological Considerations

A large number of creeks and streams are mapped in the portion of the Carrizo Planning Area under County jurisdiction, in particular in the mountainous areas to the west. Jurisdictional areas would also include additional unmapped tributaries, including intermittent channels, which can only be identified through site-specific analysis. Serpentine soils are not mapped in the planning area, but vernal pool habitat is identified in a number of locations.

NORTH COUNTY PLANNING AREA

The North County Planning Area is the largest of the five planning areas, encompassing the northern half of the county (excluding the coastal zone). Most of this planning area is under County jurisdiction, with the south central portion (Los Padres National Forest) and northern portion (Camp Roberts) under federal ownership. Agriculture, open space, and rural lands are most abundant, with development concentrated primarily along the Highway 101 corridor. The following descriptions reflect conditions in the portions of the North County Planning Area under County jurisdiction.

Vegetation and Habitats

Agriculture, including vineyards, is common along Highway 101 and State Routes 46 and 41, as well as portions of the eastern part of the North County Planning Area. Grasslands, oak savanna, and coastal sage scrub dominate the majority of the eastern half of the planning area, while chaparral and woodlands are prevalent in the western and southern portions.

Predominant land cover and vegetation types in the North County Planning Area (excluding the Coastal Zone) include the following (data and descriptions from USGS 2011):

- **Developed, Open Space.** Includes areas with a mixture of structures and impervious surfaces, but mostly vegetation in the form of lawn grasses. Impervious surfaces account for less than 20 percent of total cover. These areas most commonly include large-lot single-family housing units, parks, golf courses, and vegetation planted in developed settings for recreation, erosion control, or aesthetic purposes.
- **Developed, Low Intensity.** Includes areas with a mixture of structures, impervious surfaces, and vegetation. Impervious surfaces account for 20–49 percent of total cover. These areas most commonly include single-family housing units.
- **Developed, Medium Intensity.** Includes areas with a mixture of structures, impervious surfaces, and vegetation. Impervious surfaces account for 50–79 percent of the total cover. These areas most commonly include single-family housing units.
- **California Coastal Live Oak Woodland and Savanna.** These coast live oak-dominated woodlands occur throughout the Pacific coastal areas from Sonoma County, California, south to Baja California. Cover varies from nearly interlocking canopies with lush understory shrubs such as California blackberry, creeping snowberry, toyon, and poison oak to more open conditions with long-lived grasses. Open stands typically occur on south-facing slopes. Denser stands are often in areas with more moisture, such as north-facing slopes or at the bottom of a slope. Past activities such as fire, fire suppression, livestock grazing, or herbivory by feral pigs or other wildlife can also affect stand structure.
- **California Central Valley Mixed Oak Savanna.** Historically, these savannas occurred on alluvial terraces and flat plains, often with deep, fertile soils, throughout California's Central Valley from Lake Shasta south to Los Angeles County. Valley oak is the characteristic oak of these savannas, though other types may be present including interior live oak, coast live oak, and blue oak. California buckeye, Texas redbud, California juniper, and purple needlegrass are common. Much of the undergrowth prior to the invasion by non-native annual herbs was likely composed of native annual wildflowers such as tarweed, buckwheat, clover, gilia, pincushion-plant, lupine, western rosinweed, vinegar-weed, trefoil, wild carrot, and tarbush. There is considerable seasonal and annual variation in cover of undergrowth species due to timing of flowering and seasonal variation in precipitation and temperature. Today much of this vegetation has been replaced by agriculture and housing developments.
- **California Mesic Chaparral.** This vegetation occurs on moist sites such as north-facing slopes, concavities, or the bottom of slopes throughout coastal California but inland from the coastal fog belt. It occurs mostly up to 1,500 meters (4,920 feet) in elevation; up to 1,830 meters (6,000 feet) in Southern California. It is dominated by a variety of mixed or single shrub species that are evergreen, thick-leaved, and drought resistant. Common species include scrub oak, scrub interior live oak, birchleaf mountain-mahogany, California ash, silktassel, toyon, honeysuckle, hollyleaf cherry, hollyleaf buckthorn, and hollyleaf redberry. Most chaparral species are fire-adapted, resprouting vigorously after

burning or producing fire-resistant seeds. However, this is not a habitat that requires frequent fire for perpetuation.

- **California Central Valley Riparian Woodland and Shrubland.** This vegetation occurs in the floodplains of small to mid-sized rivers of California's Central Valley. Alluvial soils and late winter/early spring flooding (usually every year) from snowmelt typify this habitat. Communities are predominantly floodplain woodlands but also include shrublands, wet meadows, and flats. Important trees and shrubs include Fremont cottonwood, California sycamore, valley oak, Goodding's black willow, boxelder, common buttonbush, and California wild grape. Eastern black walnut hybrids, tamarisk, and tree of heaven are problem invasive trees. Santa Barbara sedge, California mugwort, and various marsh species occur along riverbanks and backwaters. Giant reed is another common invasive and introduced forage species that often invades degraded areas within the floodplains. Periodic flooding and associated sediment scour are necessary to maintain growth and reproduction of vegetation. Flooding regimes have been significantly altered in all but a few tributaries that support this vegetation.
- **Temperate Pacific Freshwater Emergent Marsh.** These are freshwater marshes, mostly permanently flooded or semi-permanently flooded. They are dominated by emergent herbaceous species, usually sedges, rushes, bullrush, spikerush, or cattail. They are called emergent because the plants are rooted in the mud at the bottom of the lake or pond, and "emerge" through the water surface. Red-winged blackbirds can be abundant in the spring in these habitats.
- **Open Water (Fresh).** All areas of open water, generally less than 25 percent cover of vegetation or soil. Specifically, inland waters of streams, rivers, ponds, and lakes.
- **Sonora-Mojave Creosotebush-White Bursage Desert Scrub.** This widespread warm desert scrub occurs in broad valleys, lower bajadas, plains, and low hills in the Mojave and lower Sonoran deserts, arid parts of the San Joaquin Valley, and the Carrizo Plain. This sparse to moderately dense shrubland is composed of creosote bush and white burrobush, but many different shrubs, dwarf-shrubs, and cacti may be present. Other common plants include desert-holly, brittlebush, Nevada joint-fir, ocotillo, and beavertail cactus. Grass and herb cover is sparse, except during springs following above-average winter rains when ephemeral annual plants carpet the desert floor.
- **Cultivated Cropland.** Areas used for the production of annual crops, such as corn, soybeans, vegetables, tobacco, and cotton, and also perennial woody crops such as orchards and vineyards. Crop vegetation accounts for greater than 20 percent of total land cover. This class also includes all land being actively tilled.
- **Pasture/Hay.** Areas of grasses, legumes, or grass-legume mixtures planted for livestock grazing or the production of seed or hay crops, typically on a perennial cycle. Pasture/hay habitat accounts for greater than 20 percent of total land cover.
- **California Central Valley and Southern Coastal Grassland.** This vegetation is found from 10 to 1,200 meters (30–3,600 feet) elevation; receiving on average 50 centimeters or approximately 20 inches of precipitation per year (range 25–100 cm, or approximately 10–39 inches), mainly as winter rain. It is found with fine-textured soils, moist or even waterlogged in winter, but very dry in summer. These grasslands are common among oak savanna and woodland and probably experience similar frequent fire regimes. Characteristic plant species include purple needlegrass, threeawn, boreal yarrow, blow-wives, annual goat-chicory, common golden star, prettyface, wavy leaf soap-plant, winecup fairy fan, tall mountain shooting star, blue wild rye, beardless lyme grass, California fescue, California melic grass, attenuate Indian-paintbrush, and curly

bluegrass. Annual grasses and herbs such as wild oats, foxtail, brome grasses, wild mustards, and star thistles are common and often abundant throughout the grasslands.

- **Mediterranean California Mesic Serpentine Woodland and Chaparral.** This vegetation occurs in the north and south Coast Ranges and the northern Sierra Nevada, on cool northerly and concave slopes and toeslopes with thin, rocky, ultramafic (gabbro, peridotite, serpentinite) soils. These shrublands and woodlands are highly variable and spotty in distribution, and the composition of individual stands can be very diverse, especially the shrubs (often individual species have low cover). Sargent cypress, gray pine, interior silk tassel, leather oak, California laurel, and hoary coffeeberry are characteristic. Common associates include toyon, chamise, and the California endemics sticky whiteleaf manzanita and Jepson ceanothus. In some settings, big berry manzanita, California snowdrop bush, or mountain mahogany can be common. Occasionally, Port Orford cedar may be present. Common grasses and forbs can include Torrey melic, blue fescue, iris, and locally endemic serpentine forbs (*Senecio* spp. and others). Structurally, this vegetation is sometimes woodland in character, but it can also be an arborescent chaparral, depending on fire history.
- **California Lower Montane Blue Oak-Foothill Pine Woodland and Savanna.** This is an open pine-oak woodland of the valley margins and foothills of the Sierra Nevada and Coast Ranges of California, ranging from approximately 120 to 1,200 meters (360–3,600 feet) elevation on rolling plains and dry slopes. High-quality stands are open and park-like foothill pine, typically including blue oak, interior live oak, coast live oak, valley oak, California buckeye, manzanita, redbud, buckbrush, California coffeeberry, oak woods gooseberry, California juniper, or Coulter pine. Foothill pine tends to drop out all together in the driest and more southerly sites, which are then dominated by blue oak. Foothill pine density varies based on intensity or frequency of fire, being less abundant in areas of higher intensity or frequency fires; hence, it is often more abundant on steep, rocky, or more mesic north-facing slope exposures.
- **Southern California Coastal Scrub.** This mixed coastal shrubland occurs from Central California south into Baja California Norte, Mexico. It is composed of drought-deciduous shrubs such as California sagebrush, black sage, white sage, purple sage, California brittlebush, and California wild buckwheat. Fire-tolerant evergreen shrubs, laurel sumac, lemonade sumac, and holly leaf buckthorn are also present. Recent increases in the number of fires have converted many of these shrublands to non-native annual grasslands. The abundance of fire-tolerant shrubs and coastal prickly-pear has increased in many areas.

Special-Status Species and Critical Habitat

The following special-status species have been recorded in the North County Planning Area (CDFW 2014a):

- Vernal pool fairy shrimp
- Tidewater goby (*Eucyclogobius newberryi*)
- Southern steelhead (*Oncorhynchus mykiss irideus*)
- Blunt-nosed leopard lizard
- California red-legged frog (*Rana draytonii*)
- California tiger salamander
- California condor

- Bald eagle (Haliaeetus leucocephalus)
- Swainson's hawk (*Buteo swainsoni*)
- Least Bell's vireo (*Vireo bellii pusillus*)
- Bank swallow (*Riparia riparia*)
- San Joaquin kit fox
- Giant kangaroo rat
- California jewelflower
- Santa Lucia purple amole (*Chlorogalum purpureum* var. *purpureum*)
- Camatta Canyon amole (*C. p.* var. *reductum*)
- San Luis Obispo fountain thistle (*Cirsium fontinale* var. *obispoense*)
- Spreading navarretia (*Navarretia fossalis*)
- Kern mallow

There is designated critical habitat for several species in the North County Planning Area under County jurisdiction. California red-legged frog critical habitat extends along most of the western and southern portions of the planning area, as well as in the northeastern corner. Vernal pool fairy shrimp critical habitat is concentrated around the Paso Robles area. California tiger salamander critical habitat partially overlaps California red-legged frog critical habitat in the northeastern portion of the planning area, along the boundary with Kern County. There is one area of critical habitat for Camatta Canyon amole in the southern part of the planning area. A number of watercourses in the western and central portions of the planning area, including the Salinas River, are designated as critical habitat for southern steelhead.

Migration and Wildlife Movement

Missing Linkages and Essential Habitat Connectivity Areas identified in the North County Planning Area include the following:

- **Los Padres Connector-Hearst Castle**. Located in the northwestern portion of the planning area, this north–south landscape linkage follows the Santa Lucia Range and associated Essential Habitat Connectivity Areas. Key species include mountain lion, bear, spotted owl, and red-legged frog.
- **Lower North Salinas River**. This north–south landscape linkage spans the entire planning area along the central portion and connects the Santa Lucia and Diablo ranges via the Salinas River. Key species utilizing this linkage include neotropical migrant birds, steelhead, and large and small mammals.
- **South Diablo-Carrizo**. This linkage traverses the eastern portion of the planning area in a north–south direction. Key species include large mammals, mountain lion, and kit fox. This is a key area that links public lands.

Important Bird Areas in the North County Planning Area include the San Antonio Valley in the northern portion, the northern portion of the Salinas River in the county, and the Santa Margarita Valley (Audubon California 2008).

Jurisdictional Resources and Other Biological Considerations

Major water bodies in the North County Planning Area include Lake Nacimiento, Whale Rock Reservoir, Santa Margarita Lake, and the southern portion of San Antonio Lake. The Nacimiento, Salinas, and Estrella Rivers are major waterways. Jurisdictional areas would also include additional unmapped tributaries, including intermittent channels, which can only be identified through site-specific analysis. Serpentine soils are associated with mountains along the western and the eastern edges of the planning area, and vernal pool habitats occur in the central and eastern portions.

SAN LUIS OBISPO PLANNING AREA

The San Luis Obispo Planning Area is the smallest planning area and is located in the western area of the county concentrated around the city of San Luis Obispo and surrounding areas. Large portions of the western, central, and northern parts of the planning area are outside of County jurisdiction. Within County jurisdiction, primary land uses include agriculture, urban development, and rural lands. The Los Ranchos/Edna village is located on the Planning Area's southern edge. The following descriptions reflect conditions in the portions of the San Luis Obispo Planning Area under County jurisdiction.

Vegetation and Habitats

Coastal sage scrub is the most abundant vegetation in the portions of the San Luis Obispo Planning Area under County jurisdiction. Predominant land cover and vegetation types in the San Luis Obispo Planning Area include the following (data and descriptions from USGS 2011):

- **Mediterranean California Foothill and Lower Montane Riparian Woodland.** This vegetation is found throughout "Mediterranean California" (i.e., the majority of the state, with a characteristic Mediterranean climate pattern of dry summers and cool, wet winters) within a broad elevation range from near sea level up to 300 meters (1,000 feet) in the Coast Ranges and inland to 1,500 meters (4,545 feet). It often occurs as a mosaic of multiple communities that are dominated by trees with a diverse shrub component and open shrublands. It also includes open channels and bare alluvial bars. The variety of plant associations reflects elevation, stream gradient, floodplain width, and flooding events. Dominant trees may include white alder, boxelder, red alder (in Coast Ranges), Fremont cottonwood, red willow, Goodding's willow, Douglas fir, California sycamore, coast live oak, and big leaf maple (in central and south coast areas). Dominant shrubs include narrowleaf willow and arroyo willow. Exotic tree of heaven, eucalyptus, and giant reed occur. These are disturbance-driven habitats that require flooding, scour, and deposition for germination and maintenance.
- **Cultivated Cropland.** Areas used for the production of annual crops, such as corn, soybeans, vegetables, tobacco, and cotton, and also perennial woody crops such as orchards and vineyards. Crop vegetation accounts for greater than 20 percent of total land cover. This class also includes all land being actively tilled
- **Pasture/Hay.** Areas of grasses, legumes, or grass-legume mixtures planted for livestock grazing or the production of seed or hay crops, typically on a perennial cycle. Pasture/hay habitat accounts for greater than 20 percent of total land cover.
- **Developed, Open Space.** Includes areas with a mixture of structures and impervious surfaces, but mostly vegetation in the form of lawn grasses. Impervious surfaces account for less than 20 percent of total cover. These areas most commonly include large-lot

single-family housing units, parks, golf courses, and vegetation planted in developed settings for recreation, erosion control, or aesthetic purposes.

- **Developed, Low Intensity.** Includes areas with a mixture of structures, impervious surfaces, and vegetation. Impervious surfaces account for 20–49 percent of total cover. These areas most commonly include single-family housing units.
- **Developed, Medium Intensity.** Includes areas with a mixture of structures, impervious surfaces, and vegetation. Impervious surfaces account for 50–79 percent of the total cover. These areas most commonly include single-family housing units.
- **Southern California Coastal Scrub.** This mixed coastal shrubland occurs from Central California south into Baja California Norte, Mexico. It is composed of drought-deciduous shrubs such as California sagebrush, black sage, white sage, purple sage, California brittlebush, and California wild buckwheat. Fire-tolerant evergreen shrubs, laurel sumac, lemonade sumac, and holly leaf buckthorn are also present. Recent increases in the number of fires have converted many of these shrublands to non-native annual grasslands. The abundance of fire-tolerant shrubs and coastal prickly-pear has increased in many areas.
- **California Coastal Live Oak Woodland and Savanna.** These coast live oak-dominated woodlands occur throughout the Pacific coastal areas from Sonoma County, California, south to Baja California. Cover varies from nearly interlocking canopies with lush understory shrubs such as California blackberry, creeping snowberry, toyon, and poison oak to more open conditions with long-lived grasses. Open stands typically occur on south-facing slopes. Denser stands are often in areas with more moisture, such as north-facing slopes or at the bottom of a slope. Past activities such as fire, fire suppression, livestock grazing, or herbivory by feral pigs or other wildlife can also affect stand structure.
- **California Lower Montane Blue Oak-Foothill Pine Woodland and Savanna.** This is an open pine-oak woodland of the valley margins and foothills of the Sierra Nevada and Coast Ranges of California, ranging from approximately 120 to 1,200 meters (360–3,600 feet) elevation on rolling plains and dry slopes. High-quality stands are open and park-like foothill pine, typically including blue oak, interior live oak, coast live oak, valley oak, California buckeye, manzanita, redbud, buckbrush, California coffeeberry, oak woods gooseberry, California juniper, or Coulter pine. Foothill pine tends to drop out all together in the driest and more southerly sites, which are then dominated by blue oak. Foothill pine density varies based on intensity or frequency of fire, being less abundant in areas of higher intensity or frequency fires; hence, it is often more abundant on steep, rocky, or more mesic north-facing slope exposures.
- **California Coastal Redwood Forest.** These are giant coniferous forests, found in the coastal fog belt. Among the tallest forests in the world, coast redwood, Port Orford cedar, Douglas fir, and western hemlock trees grow over 300 feet tall, sometimes with tanoak and laurel subcanopies over 100 feet tall. They occur on river terraces and coastal slopes. Understory plants are diverse and typical of coastal conifer forests, although usually are composed of evergreen shrubs or perennial wildflowers.
- **California Central Valley and Southern Coastal Grassland.** This vegetation is found from 10 to 1,200 meters (30–3,600 feet) elevation; receiving on average 50 centimeters or approximately 20 inches of precipitation per year (range 25–100 cm, or approximately 10–39 inches), mainly as winter rain. It is found with fine-textured soils, moist or even waterlogged in winter, but very dry in summer. These grasslands are common among oak savanna and woodland and probably experience similar frequent fire regimes. Characteristic plant species include purple needlegrass, threeawn, boreal yarrow, blow-wives, annual goat-chicory, common golden star, prettyface, wavy leaf soap-plant,

winecup fairy fan, tall mountain shooting star, blue wild rye, beardless lyme grass, California fescue, California melic grass, attenuate Indian-paintbrush, and curly bluegrass. Annual grasses and herbs such as wild oats, foxtail, brome grasses, wild mustards, and star thistles are common and often abundant throughout the grasslands.

- **Mediterranean California Mesic Serpentine Woodland and Chaparral.** This vegetation occurs in the north and south Coast Ranges and the northern Sierra Nevada, on cool northerly and concave slopes and toeslopes with thin, rocky, ultramafic (gabbro, peridotite, serpentinite) soils. These shrublands and woodlands are highly variable and spotty in distribution, and the composition of individual stands can be very diverse, especially the shrubs (often individual species have low cover). Sargent cypress, gray pine, interior silk tassel, leather oak, California laurel, and hoary coffeeberry are characteristic. Common associates include toyon, chamise, and the California endemics sticky whiteleaf manzanita and Jepson ceanothus. In some settings, big berry manzanita, California snowdrop bush, or mountain mahogany can be common. Occasionally, Port Orford cedar may be present. Common grasses and forbs can include Torrey melic, blue fescue, iris, and locally endemic serpentine forbs (*Senecio* spp. and others). Structurally, this vegetation is sometimes woodland in character, but it can also be an arborescent chaparral, depending on fire history.
- **Temperate Pacific Freshwater Emergent Marsh.** These are freshwater marshes, mostly permanently flooded or semi-permanently flooded. They are dominated by emergent herbaceous species, usually sedges, rushes, bullrush, spikerush, or cattail. They are called emergent because the plants are rooted in the mud at the bottom of the lake or pond, and "emerge" through the water surface. Red-winged blackbirds can be abundant in the spring in these habitats.

Special-Status Species and Critical Habitat

The following special-status species have been recorded in the San Luis Obispo Planning Area (CDFW 2014a):

- Vernal pool fairy shrimp
- Morro shoulderband snail (*Helminthoglypta walkeriana*)
- Southern steelhead
- California red-legged frog
- Western yellow-billed cuckoo (*Coccyzus americanus occidentalis*)
- Morro manzanita (*Arctostaphylos morroensis*)
- Pismo clarkia (*Clarkia speciosa* ssp. *immaculata*)
- Indian Knob mountainbalm (*Eriodictyon altissimum*)
- San Luis Obispo fountain thistle

There is designated critical habitat for California red-legged frog and southern steelhead in the San Luis Obispo Planning Area under County jurisdiction. A large block of California red-legged frog critical habitat encompasses the northwest corner and the northeastern portion of the planning area. A number of watercourses in the western and central portions of the planning area are designated critical habitat for southern steelhead.

Migration and Wildlife Movement

Missing Linkages and Essential Habitat Connectivity Areas identified in the San Luis Obispo Planning Area include the Montana de Oro-Bald Mountain linkage, which runs east–west in the southern portion of the planning area. This linkage is identified as a choke-point for mountain lion movement. The Santa Lucia Range in the northeastern portion of the planning area is identified as an Essential Habitat Connectivity Area, and Natural Landscape Blocks are identified in the western portion.

Jurisdictional Resources and Other Biological Considerations

A number of creeks and streams are distributed throughout the portions of the planning area under County jurisdiction. Serpentine soils are abundant in the mountains and hills in the planning area, and vernal pool complexes have been mapped in the central portion of the area west of San Luis Obispo and along Los Osos Valley Road at the boundary of the planning area.

SOUTH COUNTY PLANNING AREA

The South County Planning Area encompasses the southernmost inland portion of the county. The eastern half of this planning area is mostly outside of County jurisdiction (under state or federal ownership; Los Padres Forest); County jurisdiction is primarily over the western half and the extreme southeastern portion of the planning area. Land uses include agriculture, urban development, and rural lands. The following descriptions reflect conditions in the portions of the South County Planning Area under County jurisdiction.

Vegetation and Habitats

Coastal scrub, agriculture, and oak woodlands are abundant in the western half of the planning area. The southeastern area under County jurisdiction is primarily agriculture.

Predominant land cover and vegetation types in the South County Planning Area include the following (data and descriptions from USGS 2011):

- **Mediterranean California Northern Coastal Dune.** These are open coastal dune habitats, ranging from small sandy areas near beaches to more extensive dunes near larger rivers and bays. They include open sand dunes, stabilized dunes with native grasses, forbs and shrubs, and rarely forests. This coastal vegetation occurs in scattered locations on the coast from Point Conception, California, north to Coos Bay, Oregon. Coastal dunes include beaches, foredunes, sand spits, and active or stable dunes made of quartz or gypsum sands. They may also occur as extensive dune fields dominating large coastal bays. Dune vegetation typically includes herbaceous, succulent, and low-shrub species with varying degrees of tolerance for salt spray, wind and sand abrasion, and substrate stability. Coyote brush, silver burr ragweed, buckwheat, and native dune grasses and forbs are most important. Introduced European beachgrass and yellow bush lupine in the north invade and change these habitats.
- **Introduced Upland Vegetation-Treed.** Vegetation dominated (typically greater than 60 percent canopy cover) by introduced species. These are spontaneous and self-perpetuating and not the direct result of planting, cultivation, or human maintenance. Land occupied by introduced vegetation is generally permanently altered (converted) unless restoration efforts are undertaken. Eucalyptus are the most abundant and

characteristic introduced trees, but some other escaped ornamentals may also be present.

- **Cultivated Cropland.** Areas used for the production of annual crops, such as corn, soybeans, vegetables, tobacco, and cotton, and also perennial woody crops such as orchards and vineyards. Crop vegetation accounts for greater than 20 percent of total land cover. This class also includes all land being actively tilled.
- **Pasture/Hay.** Areas of grasses, legumes, or grass-legume mixtures planted for livestock grazing or the production of seed or hay crops, typically on a perennial cycle. Pasture/hay habitat accounts for greater than 20 percent of total land cover.
- **Developed, Open Space.** Includes areas with a mixture of structures and impervious surfaces, but mostly vegetation in the form of lawn grasses. Impervious surfaces account for less than 20 percent of total cover. These areas most commonly include large-lot single-family housing units, parks, golf courses, and vegetation planted in developed settings for recreation, erosion control, or aesthetic purposes.
- **Developed, Low Intensity.** Includes areas with a mixture of structures, impervious surfaces, and vegetation. Impervious surfaces account for 20–49 percent of total cover. These areas most commonly include single-family housing units.
- **Developed, Medium Intensity.** Includes areas with a mixture of structures, impervious surfaces, and vegetation. Impervious surfaces account for 50–79 percent of the total cover. These areas most commonly include single-family housing units.
- **California Central Valley and Southern Coastal Grassland.** This vegetation is found from 10 to 1,200 meters (30–3,600 feet) elevation; receiving on average 50 centimeters or approximately 20 inches of precipitation per year (range 25–100 cm, or approximately 10–39 inches), mainly as winter rain. It is found with fine-textured soils, moist or even waterlogged in winter, but very dry in summer. These grasslands are common among oak savanna and woodland and probably experience similar frequent fire regimes. Characteristic plant species include purple needlegrass, threeawn, boreal yarrow, blow-wives, annual goat-chicory, common golden star, prettyface, wavy leaf soap-plant, winecup fairy fan, tall mountain shooting star, blue wild rye, beardless lyme grass, California fescue, California melic grass, attenuate Indian-paintbrush, and curly bluegrass. Annual grasses and herbs such as wild oats, foxtail, brome grasses, wild mustards, and star thistles are common and often abundant throughout the grasslands.
- **Great Basin Pinyon-Juniper Woodland.** These woodlands occur on dry mountain ranges of the Great Basin region and eastern foothills of the Sierra Nevada and in scattered locations of western California, including the Carrizo Plain. They are found on warm, dry sites on mountain slopes, mesas, plateaus, and ridges, above the valleys where sagebrush is dominant. Severe weather during the growing season, such as frosts and drought, are thought to limit the distribution of pinyon-juniper woodlands to a relatively narrow altitudinal zone. Singleleaf pinyon and California juniper, alone or mixed together, are the main trees. Shrubs and grasses may be abundant to absent all together. Typical species include manzanita, sagebrush, blackbrush, turbinella live oak, needle-and-thread grass, Idaho fescue, blue bunch wheatgrass, great basin lyme grass, and mutton grass.
- **Southern California Coastal Scrub.** This mixed coastal shrubland occurs from Central California south into Baja California Norte, Mexico. It is composed of drought-deciduous shrubs such as California sagebrush, black sage, white sage, purple sage, California brittlebush, and California wild buckwheat. Fire-tolerant evergreen shrubs, laurel sumac, lemonade sumac, and holly leaf buckthorn are also present. Recent increases in the number of fires have converted many of these shrublands to non-native annual

grasslands. The abundance of fire-tolerant shrubs and coastal prickly-pear has increased in many areas.

- **Southern California Dry-Mesic Chaparral.** This vegetation includes chaparral from sea level up to 1,500 meters (4,920 feet) elevation throughout Central and Southern California and inland portions of Baja California Norte, Mexico. It is found in semi-moist to moist site conditions. Santa Ana winds drive late-summer, stand-replacing fires in these habitats. Characteristic species include bigpod ceanothus, hoaryleaf ceanothus, chaparral whitethorn, Mojave Desert whitethorn, common chamise, redshank, big berry manzanita, birchleaf mountain-mahogany, smooth mountain-mahogany, sugar bush, and mission manzanita.
- **California Coastal Redwood Forest.** These are giant coniferous forests, found in the coastal fog belt. Among the tallest forests in the world, coast redwood, Port Orford cedar, Douglas fir, and western hemlock trees grow over 300 feet tall, sometimes with tanoak and laurel subcanopies over 100 feet tall. They occur on river terraces and coastal slopes. Understory plants are diverse and typical of coastal conifer forests, although usually are composed of evergreen shrubs or perennial wildflowers.
- **Mediterranean California Mesic Serpentine Woodland and Chaparral.** (This vegetation occurs in the north and south Coast Ranges and the northern Sierra Nevada, on cool northerly and concave slopes and toeslopes with thin, rocky, ultramafic (gabbro, peridotite, serpentinite) soils. These shrublands and woodlands are highly variable and spotty in distribution, and the composition of individual stands can be very diverse, especially the shrubs (often individual species have low cover). Sargent cypress, gray pine, interior silk tassel, leather oak, California laurel, and hoary coffeeberry are characteristic. Common associates include toyon, chamise, and the California endemics sticky whiteleaf manzanita and Jepson ceanothus. In some settings, big berry manzanita, California snowdrop bush, or mountain mahogany can be common. Occasionally, Port Orford cedar may be present. Common grasses and forbs can include Torrey melic, blue fescue, iris, and locally endemic serpentine forbs (*Senecio* spp. and others). Structurally, this vegetation is sometimes woodland in character, but it can also be an arborescent chaparral, depending on fire history.
- **California Coastal Live Oak Woodland and Savanna.** These coast live oak-dominated woodlands occur throughout the Pacific coastal areas from Sonoma County, California, south to Baja California. Cover varies from nearly interlocking canopies with lush understory shrubs such as California blackberry, creeping snowberry, toyon, and poison oak to more open conditions with long-lived grasses. Open stands typically occur on south-facing slopes. Denser stands are often in areas with more moisture, such as north-facing slopes or at the bottom of a slope. Past activities such as fire, fire suppression, livestock grazing, or herbivory by feral pigs or other wildlife can also affect stand structure.
- **Mediterranean California Foothill and Lower Montane Riparian Woodland.** This vegetation is found throughout "Mediterranean California" (i.e., the majority of the state, with a characteristic Mediterranean climate pattern of dry summers and cool, wet winters) within a broad elevation range from near sea level up to 300 meters (1,000 feet) in the Coast Ranges and inland to 1,500 meters (4,545 feet). It often occurs as a mosaic of multiple communities that are dominated by trees with a diverse shrub component and open shrublands. It also includes open channels and bare alluvial bars. The variety of plant associations reflects elevation, stream gradient, floodplain width, and flooding events. Dominant trees may include white alder, boxelder, red alder (in Coast Ranges), Fremont cottonwood, red willow, Goodding's willow, Douglas fir, California sycamore, coast live oak, and big leaf maple (in central and south coast areas). Dominant shrubs

include narrowleaf willow and arroyo willow. Exotic tree of heaven, eucalyptus, and giant reed occur. These are disturbance-driven habitats that require flooding, scour, and deposition for germination and maintenance.

- **California Lower Montane Blue Oak-Foothill Pine Woodland and Savanna.** This is an open pine-oak woodland of the valley margins and foothills of the Sierra Nevada and Coast Ranges of California, ranging from approximately 120 to 1,200 meters (360–3,600 feet) elevation on rolling plains and dry slopes. High-quality stands are open and park-like foothill pine, typically including blue oak, interior live oak, coast live oak, valley oak, California buckeye, manzanita, redbud, buckbrush, California coffeeberry, oak woods gooseberry, California juniper, or Coulter pine. Foothill pine tends to drop out all together in the driest and more southerly sites, which are then dominated by blue oak. Foothill pine density varies based on intensity or frequency of fire, being less abundant in areas of higher intensity or frequency fires; hence, it is often more abundant on steep, rocky, or more mesic north-facing slope exposures.
- **Temperate Pacific Freshwater Emergent Marsh.** These are freshwater marshes, mostly permanently flooded or semi-permanently flooded. They are dominated by emergent herbaceous species, usually sedges, rushes, bullrush, spikerush, or cattail. They are called emergent because the plants are rooted in the mud at the bottom of the lake or pond, and "emerge" through the water surface. Red-winged blackbirds can be abundant in the spring in these habitats.
- **Open Water (Fresh).** All areas of open water, generally less than 25 percent cover of vegetation or soil. Specifically, inland waters of streams, rivers, ponds, and lakes.

Special-Status Species and Critical Habitat

The following special-status species have been recorded in the South County Planning Area (CDFW 2014a):

- Longhorn fairy shrimp
- Vernal pool fairy shrimp
- Tidewater goby
- Southern steelhead
- Kern primrose sphinx moth
- Blunt-nosed leopard lizard
- California tiger salamander
- California red-legged frog
- California condor
- Swainson's hawk
- San Joaquin kit fox
- Giant kangaroo rat
- Nelson's antelope squirrel (*Ammospermophilus nelsoni)*
- Marsh sandwort (*Arenaria paludicola*)
- Pismo clarkia
- Indian Knob mountainbalm

- California jewelflower
- San Luis Obispo fountain thistle
- Surf thistle (*Cirsium rhothophilum*)
- La Graciosa thistle(*Cirsium scariosum* var. *loncholepis*)
- Beach spectaclepod (*Dithyrea maritima*)
- Nipomo Mesa lupine (*Lupinus nipomensis*)
- Kern mallow
- San Joaquin woollythreads (*Monolopia congdonii*)
- Gambel's watercress (*Nasturtium gambelii*)

Designated critical habitat in the South County Planning Area under County jurisdiction is limited to southern steelhead critical habitat along four watercourses and tributaries in the western end and a small portion of California red-legged frog critical habitat in the northwestern corner.

Migration and Wildlife Movement

The Montana de Oro-Bald Mountain linkage described under the San Luis Obispo Planning Area extends into the extreme northwestern portion of the South County Planning Area, as does the Essential Habitat Connectivity Area associated with the Santa Lucia Range. Natural Landscape Blocks are identified in the western and southern portions of the planning area under County jurisdiction.

Important Bird Areas in the South County Planning Area include the Lopez Lake Area in the northwestern portion and the Cuyama Valley along the southern border of the county (Audubon California 2008).

Jurisdictional Resources and Other Biological Considerations

Lopez Lake, Lopez Reservoir, and Twitchell Reservoir are major water bodies in the South County Planning Area. Jurisdictional areas would also include additional unmapped tributaries, including intermittent channels, which can only be identified through site-specific analysis. A limited amount of serpentine soils are mapped along the mountainous areas in the western portion of the planning area. No vernal pool complexes are mapped in this planning area.

3.4.2 REGULATORY SETTING

STATE

California Endangered Species Act

Under the California Endangered Species Act (CESA), the CDFW has the responsibility for maintaining a list of native endangered and threatened species (California Fish and Game Code Section 2070). The CESA protects all native species including fishes, amphibians, reptiles, birds, mammals, invertebrates, plants, and their habitats that are threatened with extinction or experiencing a significant decline that would lead a threatened or endangered designation if not addressed. The CDFW maintains a list of "candidate species," which are species that the CDFW formally notices as being under review for addition to the list of endangered or

threatened species. The CDFW also maintains lists of "species of special concern," which serve as species "watch lists."

Pursuant to the requirements of the CESA, an agency reviewing a proposed project within its jurisdiction must determine whether any state-listed endangered or threatened species may be present on the project site and determine whether the proposed project will have a potentially significant impact on such species. In addition, the CDFW encourages informal consultation on any proposed project that may impact a candidate species.

Project-related impacts to species on the CESA endangered or threatened list would be considered significant. State-listed species are fully protected under the mandates of the CESA. "Take" of protected species incidental to otherwise lawful management activities may be authorized under California Fish and Game Code Section 206.591. Authorization from the CDFW would be in the form of an Incidental Take Permit.

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. The CESA prohibits all persons from taking species that are state listed as endangered or threatened except under certain circumstances. The CDFW also has jurisdictional authority over streams and lakes and the wetland resources associated with these aquatic systems under California Fish and Game Code Section 1600 et seq.

Fully Protected Species

Certain species are considered fully protected, meaning that the Fish and Game 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 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 non-game birds are protected under Section 3800 and other specified birds under Section 3505.

Stream and Lake Protection

The CDFW has jurisdictional authority over streams and lakes and the wetland resources associated with these aquatic systems under California Fish and Game Code Section 1600 et seq. through administration of lake or streambed alteration agreements. Such agreements are not a permit, but rather a mutual accord between the CDFW and the project proponent. The 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 lake or stream."

The CDFW enters into a streambed alteration agreement with the project proponent and can impose conditions in the agreement to minimize and mitigate impacts to fish and wildlife resources. Because the CDFW includes under its jurisdiction streamside habitats that may not qualify as wetlands under the federal Clean Water Act definition, CDFW jurisdiction may be broader than US Army Corps of Engineers (USACE) jurisdiction.

A project proponent must submit a notification of streambed alteration to the CDFW before construction. The notification requires an application fee for streambed alteration agreements, with a specific fee schedule to be determined by the CDFW. The 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.

Oak Woodlands Conservation Act

The Oak Woodlands Conservation Act of 2001 recognizes the importance of California's oak woodlands and the critical role private landowners have in the conservation of oaks. The act identifies the Wildlife Conservation Board (WCB) as the responsible entity to implement the Oak Woodlands Conservation Program. The act created the Oak Woodlands Program with the expressed intent to accomplish the following:

- Support and encourage voluntary, long-term private stewardship and conservation of California oak woodlands by offering landowners financial incentives to protect and promote biologically functional oak woodlands.
- Provide incentives to protect and encourage farming and ranching operations that are operated in a manner that protect and encourage farming and ranching operation that are operated in a manner that protect and promote healthy oak woodlands.
- Provide incentives for the protection of oak trees providing superior wildlife values on private land.
- Encourage planning that is consistent with oak woodlands preservation.

Counties must require feasible and proportional habitat mitigation for impacts on oak woodlands as part of the California Environmental Quality Act (CEQA) process. Under Public Resources Code Section 21083.4, a county is required to determine whether projects "may result in a conversion of oak woodlands that will have a significant effect on the environment." The law applies to all oak woodlands except those dominated by black oak. When it is determined that a project may have a significant effect on oak woodlands, mitigation is required.

LOCAL

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

The Conservation and Open Space Element (COSE) provides policies for the protection of biological resources throughout the county. Many policies incorporate state and federal approaches to protect sensitive biological resources. For instance, policies require environmental review addressing any special-status species on a proposed project site. Policies recommend methods for the preservation, replacement, and enhancement of habitats and special-status species. Also, policies recommend that additional standards be developed or considered in the presence of certain conditions, such as setbacks from specified species or wildlife corridors when present on a proposed project site.

San Luis Obispo County Land Use Ordinance – Title 22 of the County Code

The Land Use Ordinance (LUO) provides numerous standards for project design and siting to identify and reduce impacts to biological resources, as discussed below.

LUO – Sensitive Resource Areas (SRA) Combining Designation

The County's Land Use Ordinance applies the Sensitive Resource Area (SRA) Combining Designation to areas of the county with special environmental qualities or to 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 SRAs provided that it is found not to create significant adverse effects on the natural features of the site or vicinity that were the basis for the SRA designation, and if they will preserve and protect such features through site design. Where SRAs are applied because of biological species, those species are not to be disturbed by construction or operation unless authorized by a conditional use permit.

LUO – Planning and Permit Procedures

Section 22.60.040 of the LUO identifies minimum application requirements for land use applications pursuant to Title 22. All land use permits except for zoning clearance require submission of a botanical report, biological report, and tree inventory plan. The Planning Director may waive these requirements based on specific site conditions or if the applicant is completing an environmental impact report pursuant to the requirements of CEQA.

LUO – Tree Preservation

Chapter 22.56 establishes the County's tree preservation requirements for trees located within urban or village reserve lines, or in areas designated by Article 9. Tree removal generally is prohibited unless approved through the land use permit process. Tree removal is allowed for trees meeting certain criteria, such as trees causing danger or conflicting with existing or utilities or improvements. Exemptions are provided for trees on residential uses, management for agricultural practices, or trunks measuring less than 8 inches in diameter at 4 feet above grade.

LUO – Development Standards for Electricity Generating Facilities

The special use standards for electricity-generating facilities provide protection for vegetation. Section 22.32 requires electricity-generating facilities to minimize soil disturbance and vegetation removal. Standards also require replanting of all disturbed areas once the disturbed areas are no longer required. Currently, all plans must submit an Environmental Quality Assurance Program addressing construction and operation with applications for conditional use permits. The contents of this plan are determined during the environmental review process.

San Luis Obispo County Voluntary Oak Woodland Management Plan

The Voluntary Oak Woodland Management Plan encourages the long-term conservation of oak woodlands using methods that are compatible with appropriate farming, ranching, and grazing operations. The plan was prepared by the Native Tree Committee of San Luis Obispo County to meet the requirements for participating in the Wildlife Conservation Board's Oak Woodlands Conservation Program. The plan suggests management techniques that private residents and

landowners can implement to conserve oak woodlands, encouraging clustered development and designing around existing trees.

Summary

Table 3.4-1 summarizes regulations and policies from the documents described above relevant to biological issues, including General Plan elements and the Land Use ordinance. Information is organized by planning area. The table also identifies where policies or standards only apply to subareas or land use designations.

TABLE 3.4-1
LOCAL POLICIES AND REGULATIONS FOR BIOLOGICAL ISSUES

Applicable Code Section	Summary
Countywide	
Agriculture Element, Policy AGP25	Applies to Agriculture land use designation or used for production agriculture and zoned other than Agriculture, for projects requiring discretionary permit: recommends protection of unique or sensitive habitat affected by the proposal through project siting to avoid significant impacts on the habitat or avoid significant impacts on the agricultural operations, design adjustments, or, when significant impacts are identified, the landowner shall implement County-approved mitigation measures consistent with the existing requirements of CEQA.
Agriculture Element, Policy AGP29.c	Applies to Agriculture land use designation or used for production agriculture and zoned other than Agriculture: When evaluating development proposals with discretionary permits, identify and protect on-site wildlife corridors as part of the CEQA process.
Conservation and Open Space Element, Policy BR 2.6	Recommends that potential adverse impacts to threatened, rare, and endangered species from development are avoided or minimized through project siting and design. • Discretionary projects to provide a biological resource survey when needed to address special-status animal and plant species and their associated habitats (Implementation Strategy BR 2.6.1) (see LUO 22.56). • Where avoidance, restoration, or replacement of habitat of special-status species is not feasible, recommends preservation and/or enhancement of similar habitat at a minimum 2:1 ratio (Implementation Strategy BR 2.6.2). • Obtain easements to protect habitat where connected to other large areas of unique or sensitive habitat. Natural open space areas in development projects should be contiguous to natural areas adjacent to sites wherever possible (Implementation Strategy BR 2.6.3).
Conservation and Open Space Element, Policy BR 1.12	Recommends that important corridors for wildlife movement and dispersal are protected as a condition of discretionary permits. Provide linkages and corridors as needed to connect sensitive habitat areas such as woodlands, forests, and wetlands. • Recommends all discretionary development applications in rural areas, including land divisions, to identify and protect wildlife corridors, and avoid disturbance of identified key wildlife corridors as the primary method of protection (Implementation Strategy BR 1.12.1). • Mitigate impacts to wildlife corridors. • If avoidance is not feasible, re-establish and/or restore important wildlife corridors that may have been damaged or disrupted (Implementation Strategy BR 1.12.2).

Applicable Code Section	Summary
Conservation and Open Space Element, Implementing Strategy SL 1.2.1	Recommends retention of natural vegetation and topography to the maximum extent feasible for all discretionary projects adjacent to blueline streams or in areas designated with at least moderate erosion potential.
Conservation and Open Space Element, Policy BR 1.1	Recommends protecting sensitive biological resources such as wetlands, migratory species of the Pacific Flyway, and wildlife movement corridors through: (1) environmental review of proposed development applications, including consideration of cumulative impacts, (2) participation in comprehensive habitat management programs with other local and resource agencies, and (3) acquisition and management of open space lands that provide for permanent protection of important natural habitats.
Conservation and Open Space Element, Policy BR 1.11	Recommends identification, protection, and enabling the management of connected habitat areas for wildlife movement. Features of particular importance to wildlife for movement may include, but are not limited to, riparian corridors, shorelines of the coast and bay, and ridgelines. Identification and designation of wildlife corridors will not interfere with agricultural uses on private lands.
Conservation and Open Space Element, Policy BR 1.12	Recommends that important corridors for wildlife movement and dispersal are protected as a condition of discretionary permits. Provide linkages and corridors as needed to connect sensitive habitat areas such as woodlands, forests, and wetlands.
Conservation and Open Space Element, Policy BR 1.13	Recommends maintenance and enhancement of existing stream channels and riparian corridors to provide for wildlife movement at roadway crossings.
Conservation and Open Space Element, Policy BR 1.15	Recommends avoiding impacts to sensitive riparian corridors, wetlands, and coastal areas to protect bird-nesting activities. • Design land divisions and development with adequate setbacks from sensitive habitat areas that are occupied during the nesting season to protect bird nesting, rearing, and fledging activities (Implementation Strategy BR 1.15.1). • Require preconstruction surveys where development is proposed in sensitive habitat areas during the nesting season in order to protect nests in active use (Implementation Strategy BR 1.15.2).
Conservation and Open Space Element, Policy BR 1.2	Recommends regulating and minimizing proposed development in areas that contain essential habitat for special-status species, sensitive natural communities, wetlands, coastal and riparian habitats, and wildlife habitat and movement corridors as necessary to ensure the continued health and survival of these species and protection of sensitive areas.
Conservation and Open Space Element, Policy BR 1.3	Recommends environmental review of development applications pursuant to CEQA and County procedures to assess the impact of proposed development on native species and habitat diversity, particularly special-status species, sensitive natural communities, wetlands, and important wildlife nursery areas and movement corridors.
Conservation and Open Space Element, Policy BR 1.4	Recommends that development projects are approved with conditions and mitigation measures to ensure the protection of sensitive resources and to achieve “no net loss” of sensitive habitat acreage, values, and function. Give highest priority to avoidance of sensitive habitat. When avoidance is not feasible, require provision of replacement habitat onsite through restoration and/or habitat creation. When on-site mitigation is not feasible, provide for off-site mitigation that reflects no net loss.
Conservation and Open Space Element, Policy BR 1.9	Recommends that proposed discretionary development protects and enhances ecotones or natural transitions between habitat types because of their importance to vegetation and wildlife. Ecotones of particular concern include those along the margins of riparian corridors, baylands and marshlands, vernal pools, and woodlands and forests where they transition to grasslands and other habitat types.

Applicable Code Section	Summary
Conservation and Open Space Element, Policy BR 2.4	Recommends support of recovery programs for endangered and threatened species. • Recommends that applications for discretionary land use projects and land divisions located in the habitat for endangered or threatened species be consistent with applicable recovery plans (Implementing Strategy BR 2.4.1).
Conservation and Open Space Element, Policy BR 2.5	Recommends the County should coordinate with the US Fish and Wildlife Service to ensure that General Plan amendments do not conflict with the final recovery plans for federally listed species.
Conservation and Open Space Element, Policy BR 2.8	Recommends promoting and supporting efforts to reduce the effects of noxious weeds on natural habitats. • Encourage scientific study, monitoring, and active management where biotic communities and habitats of limited distribution or sensitive natural plant communities are threatened by the spread of invasive non-native species (Implementation Strategy BR 2.8.1). • Prohibit use of invasive plant species in landscaping of proposed development (Implementing Strategy BR 2.8.2). • Recommends the removal of invasive exotic plant species, to the extent feasible, when reviewing discretionary development projects, and include monitoring to prevent re-establishment in managed areas (Implementing Strategy BR 2.8.3).
Conservation and Open Space Element, Policy BR 2.9	Recommends landscaping for proposed development that will use a variety of native or compatible non-native, non-invasive plant species as part of project landscaping to improve wildlife habitat values.
Conservation and Open Space Element, Policy BR 3.1	Recommends protection of native and biologically valuable trees, oak woodlands, trees with historical significance, and forest habitats to the maximum extent feasible.
Conservation and Open Space Element, Policy B 3.2	Recommends proposed discretionary development and land divisions to avoid damage to native trees (e.g., Monterey Pines, oaks) through setbacks, clustering, or other appropriate measures. When avoidance is not feasible, require mitigation measures. • If avoidance is not feasible, require mitigation measures such as tree replacement (Implementation Strategy BR 3.2.1).
Conservation and Open Space Element, Policy BR 3.3	Recommends maintenance and improvement to oak woodland habitat to provide for slope stabilization, soil protection, species diversity, and wildlife habitat. • Comply with the Oak Woodlands Preservation Act (Public Resources Code Section 21083.4) through the review of proposed discretionary development by maintaining the integrity and diversity of oak woodlands, chaparral communities, and other significant vegetation (Implementation Strategy BR 3.3.1).
Conservation and Open Space Element, Policy BR 3.5	Recommends protection of healthy and non-hazardous, non-native trees (e.g., eucalyptus groves) and forests that provide raptor nesting or roosting sites or support colonies of monarch butterflies.
Conservation and Open Space Element, Policy VR 4.2	Recommends within suggested scenic corridors in the COSE: Balance the protection of scenic resources with the protection of biological and agricultural resources that may co-exist within the scenic corridor.
Conservation and Open Space Element, Implementing Strategy BR 1.15.2	Recommends preconstruction surveys, using established protocols, where development is proposed in sensitive habitat areas during the nesting season in order to protect nests in active use.
Title 22, Article 8, Section 22.32.030.B	Electric-generating plants will submit an Environmental Quality Assurance Program addressing construction and operation of the facility, with contents to be confirmed during the environmental review process.

Applicable Code Section	Summary
Title 22, Article 8, Section 22.32.030.C	Electric-generating plants will limit the land area exposed and vegetation removed to the minimum necessary to install and operate the facility. Disturbed areas no longer required for operation will be regraded, covered, and replanted.
Title 22, Chapter 22.56.020	Tree removal permits are required with zoning clearance review for tree removal in urban or village reserve lines or areas designated by Article 9. Exempt if trees meet criteria including location within residential land use designations on sites developed with residential units, and trees with trunks less than 8 inches in diameter.
Title 22, Chapter 22.56.030	Tree removal is prohibited unless dead, diseased, hazardous, interfering with existing utilities or structures, obstructing existing or proposed improvements that cannot be reasonably designed to avoid need for tree removal, or meeting other limited criteria.
Title 22, Section 22.60.040	All land use permits except for Zoning Clearance require submission of a botanical report, biological report, and tree inventory plan unless addressed through CEQA or otherwise waived by the Planning Director
Carrizo Planning Area	
No additional policies or code specific to the Carrizo Planning Area.	
North County Planning Area	
Shandon Community Plan, Shandon Community Plan, 4.6, CRP-2	Protect and preserve significant landscape features including native trees, riparian vegetation, and trees with significant aesthetic or historic significance, cultural heritage.
Title 22, Article 9, Section 22.94.040.B	North County, El Pomar Estrella subarea, AG land use designation: Any new development subject to discretionary review shall be set back a minimum of 50 feet from the top of the bank of any watercourse, or outside the dripline of riparian vegetation
Land Use Ordinance, Section III, Shandon Community Plan (4.6, CRP-2)	Protect and preserve significant landscape features including native trees, riparian vegetation, and trees with significant aesthetic or historic significance, cultural heritage.
Shandon Community Plan, Appendix D EIR Mitigation Measures, BIO-1(b)	Requires setbacks, buffers and avoidance for wetland habitats, or mitigations if impacts cannot be avoided. Designated infill parcels are exempt.
Title 22, Article 10, Section 22.104.030.A	Heritage Ranch Village: Additional standards apply, including street dedication, setbacks, vegetation protection, and botanical or biological report
Title 22, Section 22.94.020.D.3	Within the Nacimiento subarea, projects requiring Conditional Use Permit approval within the SRA combining designation: Concentrate proposed uses in the least sensitive portions of properties. Native vegetation shall be retained as much as possible.
San Luis Obispo Planning Area	
Title 22, Article 9, Section 22.98.020.E.6	San Luis Bay (south) subarea, projects requiring Conditional Use Permit approval: Concentrate proposed uses in the least sensitive portions of properties. Native vegetation shall be retained as much as possible.
South County Planning Area	
Title 22, Article 9, Section 22.108.040.A.4-5	Nipomo Community, Nipomo lowlands and Nipomo Creek: Additional drainage and creek protection measures for new development.
Title 22, Article 9, Section 22.96.020.C.1	Indian Knob Sensitive Resources Area: A site survey shall be conducted to locate any *Eriodictyon altissimum* (Indian Knob mountainbalm) prior to the approval of any land use permit, and new development shall preserve the plant.

Applicable Code Section	Summary
Title 22, Article 9, Section 22.98.072.D.3	South County subarea, North of Santa Maria River area, Industrial land use designation: Projects must protect biological resources within 150 feet of Nipomo Creek and the Santa Maria River.
Title 22, Article 9, Section 22.98.072.H.3	South County, Residential Rural land use designation in specified areas: A grading permit is required for site disturbances below the rim of Black Lake Canyon outside of the Sensitive Resource Area. Additional standards apply for wildlife corridors of native vegetation and areas containing wetlands
Title 22, Article 9, Section 22.98.072.H.9	South County subarea, specified areas: Construction and land use applications require the preparation of a biological and botanical report

3.4.3 IMPACTS AND MITIGATION MEASURES

THRESHOLDS OF SIGNIFICANCE

A biological resource impact is considered significant if implementation of the RESP would result in any of the following:

1) Result in a loss of unique or special-status species or their habitats.[1]

2) Reduce the extent, diversity, or quality of native or other important vegetation.

3) Impact wetland or riparian habitat.

4) Interfere with the movement of resident or migratory fish or wildlife species, or factors which could hinder the normal activities of wildlife.

5) Conflict with any regional plans or policies to protect sensitive species, or with regulations of the California Department of Fish and Wildlife or US Fish and Wildlife Service.

PROJECT IMPACTS AND MITIGATION MEASURES

The provisions of the proposed RESP were specifically intended to reduce or eliminate the potential for significant impacts to biological resources. Parcels intended for inclusion in the combining designation were screened to ensure there were no conservation easements or existing or intended biological conservation areas. Because each project circumstance is unique, it was considered too speculative to allow streamlining of state and federal environmental permits. Therefore, the proposed LUO specifically precludes any project that requires a wetland fill, streambed alteration, or similar environmental permit from the streamlining program.

Tier 1 projects are anticipated to be small and located either or rooftops or on areas that have little to no existing biological resources. These projects can be approved through simple ministerial review and adherence to the provisions of the LUO. Tier 2 and above projects have additional performance standards designed to reduce potential impacts.

[1] Special-status species as defined in Section 15380 of the CEQA Guidelines, which includes all plant and wildlife species that fall under the category of rare, threatened, or endangered, as described in this section.

Every ground-mounted installation is likely to have some impact to biological resources. The expectation of the RESP is that adherence to the proposed performance standards in the LUO will ensure the impacts to biological resources will be less than significant. Those projects that could have significant impact to biological resources are required to obtain approval through the Minor or Conditional Use Permit process. The use permit process requires site-specific biological reports that may result in mitigation measures specific to the project.

Result in a Loss of Unique or Special-Status Species or Their Habitats (Threshold 1)

Construction and operation of solar energy projects could result in the loss of unique or special-status species or their habitats. Direct impacts to sensitive biological resources may include mortality to plants and wildlife, disruption of breeding, and loss of important habitat. Indirect effects may occur from exposure to fugitive dust, construction noise and vibration, erosion, or the introduction or spread of nonnative plants or wildlife. Direct effects could have long-term consequences on the viability of regional populations of special-status species. Indirect effects would primarily be temporary; however, the spread of weeds can result in habitat degradation with long-term effects that extend well beyond a project site. Impacts to species listed under the federal or California Endangered Species Acts would also require incidental take authorization from the USFWS or the CDFW, respectively.

Proposed performance standard 22.14.100.C requires an application and other information prepared as specified in existing Sections 22.60.040.B, 22.60.040.D, and 22.62.040 for Site Plan Review, including a biological resources report. As described in Section 22.14.100.F.2, a project will not be eligible for streamlining under the RESP if it has the potential to result in direct or indirect impacts to any special-status species, sensitive native vegetation, or jurisdictional wetlands or waters, or to disrupt wildlife movement and migration corridors. If a project is located in the San Joaquin Kit Fox Habitat Area, complies with the standard mitigation ratio and all kit fox conditions, and the biological resources report does not indicate the presence of any additional state or federally-listed wildlife or plant species or designated critical habitat, it would also qualify for streamlining. Projects that may result in these types of impacts would require project-level CEQA review outside the scope of the RESP. The following describes only the impacts of projects eligible for streamlining under the RESP.

Impact 3-4-1 – Solar Implementation of the proposed Program could result in a loss of habitat for unique or special-status species. This impact is considered **less than significant (Class III)**.

Proposed LUO Section 22.32.050.A.3.a specifies that Tier 1 solar projects are only allowed on the roof of a conforming use or on land that was previously developed for industrial or commercial purposes and degraded or contaminated and then abandoned or underused.

Nearly all studies of avian mortality are associated with large-scale solar projects. A search of the available literature did not find a study related to avian mortality associated with roof- mounted solar panels. A January 2014 study concluded that avian mortality associated with buildings is due to reflective windows (Loss et al. 2014).

Proposed performance standard LUO 22.32.050.D.1 requires that solar panels have nonreflective surfaces to minimize glare. The nonreflective surface and the angle normally associated with the roof will avoid the solar panels being mistaken for windows as might occur with a vertical installation. Building windows are a known source of avian mortality, as the birds mistake the reflection for an “opening” in the building through which they can fly. While a horizontal (flat) installation might be mistaken for a water body, the Tier 1 roof-mounted SEF installation is too

small and surrounded by building and therefore unlikely to attract large numbers of birds and or to cause mortality for birds that land.

Proposed LUO Section 22.32.050.A.3.b requires that Tier 1 ground-mounted facilities undergo site plan review that requires preparation of both a botanical and biological report (existing LUO 22.60.040.D.3 and .4). The required reports will determine the project-specific design that would address potential bird strikes. This can include specific materials or even plantings between components designed to break up the visual appearance of the panels. If the proposed project report cannot demonstrate that impacts will be less than significant, then a discretionary Minor or Conditional Use Permit will be required. A Minor or Conditional Use Permit will require a site-specific environmental analysis. As proposed, implementation of roof-mounted Tier 1 SEF solar projects under the RESP would result in impacts that are **less than significant (Class III)**.

Tier 2 and Tier 3 solar electric facility (SEF) projects are limited to a maximum of 40 acres and 160 acres, respectively. Tier 2 and Tier 3 SEFs could include extensive grading to prepare areas for the installation of solar collectors. Tier 2 and Tier 3 SEFs could be streamlined with implementation of proposed performance standard 22.14.100.F.2, which requires the preparation of a botanical and biological report demonstrating that the project site does not contain sensitive biological resources that would be impacted by the project. For each project, the proponent would submit a biological resources report prepared by a qualified biologist, which would require a habitat assessment for special-status species.

Whenever there is ground disturbance there is the potential to impact a biological resources. The RESP, and existing county regulations, require that a biological analysis be prepared for these types of projects. It is likely that the report will result in some impact that will be addressed through project modification. These might include trimming of a tree to allow equipment to pass, covering of the soil, trenching and grubbing. These are normal construction activities and would not require special permitting. If a project cannot demonstrate avoidance of occupied habitat or habitat that could support special-status species, project-level analysis under CEQA would be required and the project would not be eligible for streamlining under the RESP.

Direct and indirect impacts to sensitive biological resources in adjacent areas would be avoided through the implementation of proposed development standards. These include setbacks (i.e., buffers) around projects (Development Standard 22.14.100.F.4- 6), a weed management plan to minimize the potential for introduction and spread of invasive weeds (Development Standard 22.32.040.C.4), and only non-invasive species allowed in landscaping. Dust control and the implementation of other best management practices are required by existing LUO Chapter 22.52. Implementation of these development standards would ensure that the RESP would result in **less than significant (Class III)** impacts to special-status species or other sensitive biological resources.

Impact 3-4-1 – Wind Implementation of the proposed Program could result in a loss of habitat for unique or special-status species. This impact is considered **less than significant (Class III)**.

Streamlining of wind projects under the RESP would be limited to Tier 1 wind energy conversion systems (WECS), which are installations mounted on a roof of a structure or conforming use (refer to **Table 2.0-1** in Section 2.0, Project Description).

During operation, birds and bats, including special-status species, can be killed or injured by turbines. However, Tier 1 WECS are limited to a height of 10 feet above the building for agricultural, rural, and public facilities for a maximum height of 45 feet, and no more than 5 feet

above the building for a maximum height of 40 feet for residential and commercial land uses (proposed County Code Section 22.32.060.C). Although special-status species could collide with these facilities, as with SEF projects, the magnitude of these effects is expected to be extremely low (Anderson). With implementation of proposed development standards, impacts from the construction and operation of Tier 1 WECS would be **less than significant (Class III).**

Tier 2 and above ground-mounted WECS projects could result in avian mortality due to the size and number of turbines in a close pattern. The siting of WECS projects of this scale requires careful study of bird migration patterns, understanding of local habitat and foraging areas, and identification of the types of bird species likely to frequent the project site. Because this information is site-specific, the RESP program requires a site-specific biological report for Tier 2 WECS projects in the combining designation and either a Minor or Conditional Use Permit and accompanying CEQA analysis for projects outside of the combining designation.

If Tier 2 WECS projects within the combining district cannot be designed to result in a less than significant impact (Class III), the project is not eligible for the streamlining program and must proceed under the traditional approval process. This process would require independent environmental analysis under CEQA as well as approval of either a Minor or Conditional Use Permit. As designed, this impact is considered **less than significant (Class III).**

Impact 3-4-1 – Policy Changes Implementation of the proposed Program could result in changes to countywide policies that could indirectly result in a loss of habitat for unique or special-status species. This impact is considered **less than significant (Class III)**.

The streamlining provisions of the proposed project only apply to projects that cannot by design have an impact to biological resources (e.g., mounted on existing buildings) or can demonstrate that there is no biological impact through a professionally prepared biological study. Nearly every project can have some biological impact; however, in most cases the project will simply be designed to avoid or eliminate the potential impact. This is done frequently with projects where driveways, grading, construction and operational characteristics can all be intentionally designed to avoid impacting resources. As these changes are both site- and project-specific, there is no way to determine the extent of change (mitigation) in this EIR. The proposed program anticipates some of the typical project mitigation and includes performance standards that address some potential impacts (e.g., LUO 22.14.100.F) and further restrict project locations near wetlands and sensitive habitat by establishing minimum setbacks. Adherence to policy changes proposed under the RESP would ensure projects would minimize impacts to special-status species and habitat. This impact would be **less than significant (Class III)**.

Reduce the Extent, Diversity, or Quality of Native or Other Important Vegetation (Threshold 2)

As described under Threshold 1, construction and operation of solar energy projects could result in loss or degradation of important vegetation. Ground disturbance, fugitive dust, and spread of non-native and invasive weeds could reduce the extent, diversity, or quality of native or other important vegetation such as annual grasslands.

Impact 3-4-2 – Solar Implementation of the proposed Program could reduce the extent, diversity, or quality of native or other important vegetation. This impact is considered **less than significant (Class III)**.

Tier 1 SEF would be located on buildings or on land that was previously disturbed, altered, or abandoned from a previous industrial or commercial use (proposed LUO 22.32.050.A.3). Because Tier 1 solar installations would be located on top of existing structures or within developed areas that do not support sensitive biological resources, implementation of Tier 1 solar projects under the RESP would not result in significant impacts to native or other important vegetation. Ground-mounted Tier 1 SEF projects must obtain site plan approval that that requires preparation of both botanical and biological reports to ensure that the site does not include sensitive species (LUO 22.60.040).

Tier 2 SEF projects within the combining designation could result in projects up to 40 acres in size. The proposed LUO requires that these sites be located in urban areas or in rural areas on sites designated as Commercial Service (CS) or Industrial (IND)(proposed LUO 22.32.050.A).

Construction and operation of ground-mounted SEF facilities could result in impacts to vegetation both on-site and on adjacent sites through introduction of invasive weeds, overspray of herbicides, and dust covering vegetation. Provisions of the proposed LUO reduce the impact of SEF projects on adjacent vegetation by requiring project setbacks (proposed LUO 22.32.050.B), a weed management plan to minimize the potential for introduction and spread of invasive weeds (proposed LUO 22.32.040.C.4), and mandating that only non-invasive species be allowed in landscaping. Dust associated with the construction and operation of ground-mounted SEFs is addressed through implementation of best management practices required by existing LUO Chapter 22.52.

Tier 2 and Tier 3 SEF projects outside of the combining designation are subject to proposed performance standards that require preparation of a biological report demonstrating that the project will not significantly impact any sensitive biological resources. If a project cannot demonstrate a less than significant impact (Class III) on native or other important vegetation, project-level analysis under CEQA would be required and the project would not be eligible for streamlining under the RESP.

Program requirements ensure SEF projects would either demonstrate that impacts to sensitive biological resources would be less than significant (Class III) or that the resources have been avoided entirely through the implementation of proposed development standards. As designed, the proposed project reduces impacts to native vegetation to a **less than significant (Class III)** level.

Impact 3-4-2 – Wind

Implementation of the proposed Program could reduce the extent, diversity, or quality of native or other important vegetation. This would be a **less than significant (Class III)** impact.

Rooftop construction of Tier 1 WECS equipment may impact nearby grasslands or vegetation, as equipment may be necessary to hoist equipment to the roof of the building and gain access to the site. Most buildings in rural environments are required to have a clear area for fire protection, and it is anticipated that the fire break setback around the structure would be used for the staging and construction of roof-mounted WECS equipment. It is possible that some tree limbs or vegetation may need to be trimmed to allow passage of larger vehicles; however as the Tier 1 projects are to be located on existing buildings, the assumption is that there is adequate existing access. There may be a temporary impact associated with driving on grassland or vegetation; however, the area is expected to recover as the interaction will likely be less than two weeks and no follow-up construction would be necessary. Other than vehicle and pedestrian movement, no ground disturbance would be associated with building-mounted equipment.

Ground-mounted WECS projects are required to provide a biological report that will include measures designed to reduce impacts to less than significant. If the project modifications cannot reduce impacts to Class III, then the project will not qualify for streamlining and must obtain either a Minor or Conditional Use Permit, which will require independent project-specific CEQA analysis and mitigation. Impacts to native vegetation from the construction and operation of WECS projects are considered **less than significant (Class III).**

Impact 3-4-2 – Policy Changes Implementation of the proposed Program could reduce the extent, diversity, or quality of native or other important vegetation. This impact is considered **less than significant (Class III)**.

The proposed project was designed to either avoid sensitive areas or require that applicants demonstrate how projects will address impacts to native vegetation. Larger Tier 2 and above projects will require either a Minor or Conditional Use Permit. These discretionary permits would also be accompanied by additional project-specific environmental analysis. Projects that cannot demonstrate that impacts to vegetation are less than significant are not eligible for the proposed RESP. Therefore, the policy changes proposed with the RESP are considered **less than significant (Class III).**

Impact Wetland or Riparian Habitat (Threshold 3)

As described under Threshold 1, construction and operation of solar energy projects could potentially result in direct loss of wetland or riparian habitat and indirect impacts from fugitive dust and spread of nonnative and invasive weeds. However, renewable energy projects have significant siting constraints under the proposed RESP because they must avoid significant impacts to sensitive biological resources, including wetland and riparian habitat. New development policy 22.14.100.C requires project proponents to submit information prepared as specified in Sections 22.60.040.B, 22.60.040.D, and 22.62.040 for Site Plan Review, including a biological resources report, which includes vegetation mapping and identification of all wetlands, streams, ponds, lakes, and other potentially jurisdictional waters at the project site. A project would not be eligible for streamlining under the RESP if it had the potential to result in direct or indirect impacts to any jurisdictional area including wetland or riparian habitat. Projects that may result in impacts would require project-level CEQA review outside the scope of the RESP and could also require permits from the CDFW, the Regional Water Quality Control Board, or the USACE, as applicable. The following describes only the impacts of projects eligible for streamlining under the RESP.

Impact 3-4-3 – Solar Implementation of the proposed Program could impact wetland or riparian habitat. This impact is considered **less than significant (Class III)**.

Streamlined Tier 1 SEF projects would only be located on land that is disturbed, altered, or abandoned from a previous industrial or commercial use. Because Tier 1 SEFs would be located on top of existing structures or within developed areas that do not support sensitive biological resources, implementation of Tier 1 solar projects under the RESP would not result in impacts to wetland or riparian habitat.

As described above, direct impacts to wetland and riparian habitat from Tier 2 and Tier 3 solar projects that would require state or federal permitting, and projects that may impact these features are not eligible for streamlining under the RESP. Impacts to sensitive biological resources in adjacent areas would be avoided through the implementation of proposed development

standards. These include setbacks (i.e., buffers) around projects, a weed management plan to minimize the potential for introduction and spread of invasive weeds, and only non-invasive species allowed in landscaping. Dust control and the implementation of other best management practices are required by existing LUO Chapter 22.52. Implementation of these development standards would minimize or avoid impacts to wetland and riparian habitats to a **less than significant (Class III)** level.

Impact 3-4-3 – Wind Implementation of the proposed Program could impact wetland or riparian habitat. This impact is considered **less than significant (Class III)**.

Tier 1 wind turbines are mounted on a roof or structure of a conforming use, with no associated ground disturbance. Therefore, construction and operation would not result in direct or indirect impacts to wetland or riparian habitat.

Impact 3-4-3 – Policy Changes Implementation of the proposed Program could impact wetland or riparian habitat. This impact is considered **less than significant (Class III)**.

As described under Threshold 1, adherence to policy changes proposed under the RESP would ensure projects would minimize impacts to wetland and riparian habitat. Impacts would be **less than significant (Class III).**

Interfere with the Movement of Resident or Migratory Fish or Wildlife Species, or Factors Which Could Hinder the Normal Activities of Wildlife (Threshold 4)

As described under Threshold 1, construction and operation of solar energy projects could result in impacts to wildlife, including habitat loss and general disturbance that could interfere with migration, movement, and normal activities. Proposed standard 22.14.100.C requires project proponents to submit information prepared as specified in Sections 22.60.040.B, 22.60.040.D, and 22.62.040 for Site Plan Review, including a biological resources report, as a component of the application. The report must include identification of wildlife movement and migration corridors in the potential project vicinity and how the project will avoid or ensure that there are no significant impacts.

A project is only allowed to continue under the RESP if it can demonstrate that impacts are reduced to less than significant with mitigation incorporated (Class II) or result in a less than significant impact (Class III). A project is not eligible for streamlining under the RESP if it will result in significant and unavoidable impacts to wildlife movement or migration (Class I). Projects that may result in significant impacts will require conventional project-level CEQA review and approval of either a Minor or Conditional Use Permit before proceeding. These discretionary permits will require additional CEQA analysis to allow for site-specific mitigation. The following describes only the impacts of projects eligible for streamlining under the RESP.

Impact 3-4-4 – Solar Implementation of the proposed Program could interfere with the movement of resident or migratory fish or wildlife species, or factors which could hinder normal activities of wildlife. This impact is considered **less than significant (Class III)**.

Tier 1 SEF projects would be located on roofs or other structures or on heavily disturbed sites with no biological resources. Proposed performance standard LUO 22.32.050.D.1 states that solar panels must have nonreflective surfaces to minimize glare. The nonreflective surface and the

angle associated with the roof will avoid the solar panels being mistaken for windows as might occur with a vertical installation. Building windows are a known source of avian mortality. While a flat installation (e.g., flat roof) might be mistaken for a water body, the Tier 1 rooftop installation is likely to be too small to attract large numbers of birds and unlikely to cause mortality for those birds that land. The anticipated angle of installation on a normal sloping roof will avoid the appearance of a window and reduce or eliminate the potential to disrupt bird migration. Tier 1 SEF ground-mounted facilities are required to obtain site plan approval that involves preparation of botanical and biological reports. These reports will determine whether the proposal is eligible for processing as a Tier 1, or because of potential impacts to wildlife movement, must be processed with additional CEQA analysis and a Minor or Conditional Use Permit. Implementation of Tier 1 solar projects under the RESP would result in a **less than significant impact (Class III)** to wildlife movement or migration.

Tier 2 SEF ground-mounted projects within the combining designation can be up to 40 acres in size but can only be located on land that is graded, disturbed, or altered, located on Brownfield land that was previously developed for industrial or commercial purposes, and degraded or contaminated and then abandoned or underused (proposed LUO 22.32.050.A.3). Parcels eligible for inclusion in the combining designation were also screened to reduce the potential to affect known sensitive habitats or wildlife corridors. Tier 2 SEF and above projects outside of the combining designation could be between 40 acres and 160 acres in size. Projects of this size can impede wildlife seasonal migration or daily movement if constructed within a movement corridor. However, these projects are required by performance standard LUO 22.14.100.C to prepare a biological resources report as part of the application, which is specific to the project and design. The report will determine whether the project can avoid any identified migration corridor or whether additional analysis is necessary. Further, projects of this size outside of the combining designation must obtain a Minor or Conditional Use Permit which is discretionary and requires independent project-specific environmental analysis.

During construction, ground disturbance, noise and vibration, and general disturbance from human activity can discourage wildlife use or result in hazards to wildlife attempting to move through the area; however, these effects would be minimized through implementation of development standards requiring setbacks from areas that could be used by wildlife. During operation, fences or operations and maintenance activities can exclude wildlife. Development standards requiring setbacks and wildlife-friendly fencing would reduce impacts to a **less than significant (Class III)** level. No interference with fish migration or movement would occur, as eligible projects would not impact wetlands or waters.

Impact 3-4-4 – Wind

Implementation of the proposed Program could interfere with the movement of resident or migratory fish or wildlife species, or factors which could hinder normal activities of wildlife. This impact is considered **less than significant (Class III)**.

Streamlining of wind projects under the RESP is limited to Tier 1 WECS, which are installations mounted on a roof of a structure or conforming use (refer to **Table 2.0-1**). As discussed in Impact 3-4-1 above, roof-mounted WECs equipment is not likely to result impacts to birds. Roof-mounted facilities will be on buildings that are well separated, allowing movement all around them and resulting in no impact to bird migratory patterns or movement.

Although migratory and resident species could collide with these facilities, the magnitude of these effects is expected to be low (Anderson). With implementation of proposed development standards, impacts to wildlife movement and migration from Tier 1 WECS would be **less than significant (Class III).**

Tier 2 and above WECS projects could result in avian mortality due to the size and number of turbines in a close pattern. The siting of WECS projects of this scale requires careful study of bird migration patterns, understanding of local habitat and foraging areas, and identification of the types of bird species likely to frequent the project site. Because this information is site-specific, the RESP program requires a site-specific biological report for Tier 2 WECS projects in the combining designation and either a Minor or Conditional Use Permit and accompanying CEQA analysis for projects outside of the combining designation. If Tier 2 WECS projects within the combining district cannot be designed to result in a less than significant impact (Class III), the project is not eligible for the streamlining program and must proceed under the traditional zoning approval process. As designed, this impact is considered **less than significant (Class III).**

Impact 3-4-4 – Policy Changes Implementation of the proposed Program could interfere with the movement of resident or migratory fish or wildlife species, or factors which could hinder normal activities of wildlife. This impact is considered **less than significant (Class III)**.

The proposed project is specifically designed to guide renewable energy projects to areas with minimal biological impact. Tier 1 SEF and WECS projects are to be mounted on buildings or on previously disturbed soils. Tier 1 SEF ground-mounted installations must also obtain site plan approval that requires preparation of a botanical and biological report. (LUO 22.60.040) These reports will be used to ensure that a project does not have a significant impact on wildlife movement. Tier 2 projects inside the combining designation must maintain a setback from sensitive bird nesting habitat, wetlands, drainages, and vernal pools. Tier 2 and above SEF and WECS projects outside of the combining designation must obtain either a Minor or Conditional Use Permit. These discretionary permits require site-specific environmental analysis. Through a combination of proposed LUO performance standards and prohibition, the proposed project will have a **less than significant (Class III)** impact on wildlife activities**.**

Conflict with Any Regional Plans or Policies to Protect Sensitive Species, or with Regulations of the California Department of Fish and Wildlife or US Fish and Wildlife Service (Threshold 5)

Proposed SEF or WECS projects that require a state or federal permit to address impacts to biological resources are not eligible for streamlining and the RESP does not apply. As described in Section 2.0, Project Description, parcels included in the combining designation were screened to avoid conservation easements, Open Space land use categories, and areas that are or are intended for preservation for unique biological values.

Impact 3-4-5 – Solar Implementation of the proposed Program could conflict with regional plans or policies to protect sensitive species or with state or federal regulations. This impact is considered **less than significant (Class III)**.

Streamlined Tier 1 solar projects would be located on roofs or other structures, or on disturbed sites with no biological resources. Because Tier 1 solar installations would be located on top of existing structures or within developed areas that do not support sensitive biological resources, implementation of Tier 1 solar projects under the RESP would not result in significant impacts to sensitive biological resources protected by local, regional, state, or federal plans, policies, or regulations.

Any project with impacts to species regulated by the CDFW or the USFWS that would require state or federal permitting is not eligible for streamlining under the RESP. Impacts to sensitive species covered under regional plans or policies from Tier 2 and Tier 3 SEFs would be as

described under Threshold 1. Birds and bats could potentially collide with Tier 2 and Tier 3 solar projects. Although species protected by local, regional, state, or federal plans, policies, or regulations could collide with these facilities, the magnitude of these effects is expected to be low (Anderson). As proposed, the RESP was specifically designed to avoid conflicting with regional plans or policies or with federal or state regulations. Therefore, this impact is considered **less than significant (Class III).**

Direct and indirect impacts to sensitive biological resources in adjacent areas would be avoided through the implementation of proposed development standards. These include setbacks around projects, a weed management plan to minimize the potential for introduction and spread of invasive weeds. Dust control and the implementation of these development standards would ensure that the RESP would not result in significant impacts to sensitive biological resources protected by local, regional, state, or federal plans, policies, or regulations. In addition, Development Standard 22.14.100.F.1-2 would require compliance with applicable standards from regional plans or policies, including compliance with the conservation easement requirements of the County's San Joaquin Kit Fox Program. With implementation of development standards, impacts would be **less than significant (Class III)**.

Impact 3-4-5 – Wind Implementation of the proposed Program could conflict with regional plans or policies to protect sensitive species or with state or federal regulations. This impact is considered **less than significant (Class III)**.

Tier 1 wind turbines are mounted on a roof or structure of a conforming use and would not impact most sensitive species. As described under Threshold 1, birds and bats could potentially collide with Tier 1 WECS. Although species protected by local, regional, state, or federal plans, policies, or regulations could collide with these facilities, the magnitude of these effects is expected to be low (Anderson). Therefore, conflicts with regional plans or policies, or federal or state regulations would be **less than significant (Class III).**

Impact 3-4-5 – Policy Changes Implementation of the proposed Program could conflict with regional plans or policies to protect sensitive species or with state or federal regulations. This impact would be **less than significant (Class III)**.

As noted in this section, the proposed project was specifically designed to direct SEF and WECS projects to areas with minimal biological value. Tier 1 projects are encouraged to be roof-mounted, thereby using an existing building footprint instead of disturbing new ground. Ground-mounted Tier 1 projects must obtain a site plan approval that requires preparation of biological and botanical reports to ensure that sensitive species are not impacted. Tier 1 and 2 projects within the combining designation are also expected to be located on previously disturbed soils and commercial or industrial property.

For Tier 2 and above projects, a biological report must be prepared to demonstrate that the proposed project would result in minimal impacts to sensitive species and habitat. The RESP specifically precludes any project from the program if it needs a state or federal permit for approval. This would preclude streambed alteration permits and wetland fill permits. The streamlining policies proposed with the RESP are not intended to apply to all projects. The RESP acknowledges that projects that do not qualify for streamlining are able to follow the traditional method of project consideration (e.g., Minor or Conditional Use Permit). These methods allow consideration of site-specific project features as well as project-specific mitigation measures. Policy changes proposed under the RESP would not conflict with existing applicable regional

plans or policies and would not conflict with state or federal regulations protecting biological resources. Impacts would be **less than significant (Class III).**

CUMULATIVE IMPACTS

The geographic scope for cumulative analysis for biological resources encompasses the entire county, as even localized impacts to biological resources are important at a regional scale. As described above, renewable energy projects streamlined under the RESP would have negligible impacts to sensitive biological resources because demonstrating avoidance of significant impacts to biological resources is a requirement for eligibility under the RESP.

Countywide conditions and programs include standards to minimize impacts to biological resources, such as setbacks, restoration, and compensatory mitigation; these would apply to all development projects regulated by the County. Similarly, compliance with proposed development standards described above under Thresholds 1 through 5 would ensure that renewable energy projects streamlined under the RESP avoid or minimize impacts to biological resources. Therefore, countywide conditions, programs, and projections, in combination with the proposed RESP, would not result in a significant cumulative impact to biological resources and the RESP's contribution would not be cumulatively considerable.

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3.5 Cultural Resources

Cultural resources can reflect the history, diversity, and culture of the region and people who created them. They are unique in that they are often the only remaining evidence of the activity that occurred historically. San Luis County is rich in cultural resources that could be affected by development of renewable energy projects without adequate protections in place. This section of the EIR considers and evaluates the potential impacts of the Renewable Energy Streamlining Program (RESP or Program) on cultural resources. Cultural resources encompass archaeological, traditional, and built environment resources, including but not necessarily limited to buildings, structures, objects, and sites. Cultural resources include sites of important events, traditional cultural places and sacred sites, and places associated with an important person.

In this document, cultural resources are classified by their origins as follows: prehistoric resources, historic-era resources, and ethnographic resources. Prehistoric resources are associated with the initial human use and occupation of the San Luis Obispo County region prior to prolonged European contact. In the county, the prehistoric period began over 12,000 years ago and extended through the eighteenth century until about 1772 when the Spanish Mission at San Luis Obispo was established.

Historic period resources are associated with European and Euro-American exploration and settlement of the area and the beginning of a written historical record for the region, and can include any historic resource that is at least 50 years old, including built-environment resources such as structures or portions of structures. Built-environment resources are a type of historic period resource and are architectural in nature.

Ethnographic resources are those resources that are of importance to a specific group of people (e.g., Native Americans, Hispanic Americans, Mormons, or African Americans) and are sometimes also referred to as traditional cultural properties. The identification of ethnographic resources is best accomplished through archival research and consultation with those groups who derive cultural importance from the place and, ideally, ethnography of those groups of concern. These resources encompass a broad range of resource types, such as prehistoric and historic archaeological sites, ceremonial areas, traditional collection areas, or places of political, religious, or historical importance.

Paleontology is defined as a science dealing with the life of past geological periods as known from fossil remains. Paleontological resources include fossil remains as well as fossil localities and formations that have produced fossil material. Such locations and specimens are important nonrenewable resources. The California Environmental Quality Act (CEQA) offers protection for these sensitive resources and requires that they be addressed during the environmental impact report process.

3.5.1 PHYSICAL SETTING

The setting discussion for cultural resources in the Renewable Energy (RE) Combining Designation areas addresses the prehistory, ethnography, and history of San Luis Obispo County. In addition, current Native American concerns are discussed. While some EIR sections discuss the setting by planning area, cultural resources are best addressed for the county as a whole. The identification and evaluation of cultural resources can only be accomplished through pedestrian survey of a project area because each and every cultural resource site is unique in its location, preservation of artifacts and features, and extent of its boundaries.

Only a small portion of the county has been surveyed; therefore, only a small portion of the cultural resources present within the county have been identified. However, with recent

technological developments, especially in geographic information systems (GIS), cultural resource data is becoming more useful for large-scale planning purposes.

Archaeological site records in California are housed at ten independently run, regional depositories, and these Information Centers are currently in the process of digitizing the site records and reports, and plotting the location of sites and surveys in GIS programs. GIS analysis of this data, once it is entirely digitized and operational (estimated to be accomplished in four to eight years, would provide myriad opportunities for querying the data, such that correlations between sites and environmental variables can provide a predictive power with a high degree of confidence in those predictions.

PREHISTORY

The prehistory of the Central Coast, including San Luis Obispo County, is divided into seven periods: Paleo-Indian (pre 8000 cal BC), Millingstone Horizon (8000 to 3500 cal BC), Early Period (3500 to 600 cal BC, Middle Period (600 cal BC to cal AD 1000), Middle/Late Transition (cal AD 1000 to 1250), and Late Period (cal AD to 1250 to 1769). The Early, Middle, and Late Periods are largely defined by distinctive shell bead types as well as changes in the daily lives of the people who used them.

Sites representing all of these periods are present in the county. Prehistoric site types include but are not limited to rock art, lithic scatters, shell middens, bedrock milling features, burials, hearths, pits, quarries, and trails.

The Paleo-Indian Period consists of the earliest evidence of human occupation of the Central Coast. It began relatively soon after the subsidence of the glacial areas from the high elevation portions of Northern California and during a time of great climatic and environmental changes (Erlandson et al. 2007; Jones and Klar 2007; West et al. 2007). Three major cultural traditions appear in California during this time: the Paleocoastal tradition, a coastal tradition identified by microlith technology and barbed projectile points; the Western Stemmed Point tradition, an interior tradition identified by stemmed points; and the Clovis tradition, an interior tradition identified by fluted points (Erlandson and Braje 2012).

Sites from this time period are very rare. However, isolated fluted projectile points have been found near Nipomo and Santa Margarita. At least seven other sites from this time period have been identified in the county along the coast and in the interior. These include caves, campsites near springs, coastal shell middens, burials, and lithic scatters. Scholars consider these sites to be the earliest, most extensive, and best documented records of maritime activity in the Americas (Erlandson et al. 2007).

The Millingstone Horizon is characterized by subsistence strategies focused on shellfish, the adoption of stone tools used for grinding grain and seeds (milling stones, slabs, handstones, etc.), and reduced numbers of lithic artifacts such as projectile points. The adoption of milling stones indicates that the people relied more heavily on a seed- and grain-based diet (Jones et al. 2007).

Millingstone occupations along the Central Coast have been recognized at more than 42 sites in a range of settings including rocky coasts, estuaries, and near-shore interior valleys. Few Millingstone sites have been found farther than 25 kilometers (16 miles) inland from the shore, and most contained marine shells, indicating that the site inhabitants also exploited coastal environments (Jones et al. 2007).

Early Period sites along the Central Coast are characterized by thick, rectangular (Class L) *Olivella* shell beads, continued use of milling slabs, and the initial adoption of mortars and

pestles, indicating greater use of labor-intensive nut crops. Inter-regional trade, indicated by small amounts of obsidian, also began during this period.

People lived increasingly sedentary lifestyles and relied heavily on fish and land mammals rather than shellfish (Jones 2003). Early Period sites are present along the coast and in the interior of the county, but the total number is unknown since the entire county has not been surveyed. However, research suggests that all of California supported a relatively high population density beginning in this period. As such, Early Period sites are expected to be common throughout the county.

The Middle Period sites along the Central Coast are marked by normal saucer (G2) *Olivella* shell beads. Diet, subsistence technology, and settlement patterns shifted during this time. There was an increase in fishing, with the associated adoption of new fishing technology, particularly shell fishhooks and the plank canoe (*tomol*). In addition, there was an increased reliance on mortar and pestles, indicating the increasing importance of acorns in the diet (Jones et al. 2007).

Both the coastal and interior sites were occupied year-round; however, coastal groups migrated inland during the fall (Jones 2003). Inter-regional trade was at its peak during this period, with the Central Coast importing obsidian and other raw materials for stone tool and exporting otter and rabbit hides. The total number of Middle Period sites in San Luis Obispo County is unknown, but research suggests they are numerous.

The Middle/Late Transition Period is characterized by the first adoption of the bow and arrow as well as mortars fitted with a basketry hopper. In contrast to other parts of California, during this period the Central Coast shows a decrease in the quantity and diversity of obsidian artifacts and a decrease in otter bones. This pattern suggests that regional trade networks may have broken down (Jones 2003).

Late Period artifact assembles are characterized by lipped (Class E) and cupped (Class K) *Olivella* shell beads, as well as the appearance of Desert Side-Notched and Cottonwood arrow points, small bifacial bead drills, bedrock mortars, steatite disk beads, and small serrated arrow points. While some large settlements were present on the coast, Late Period sites are more commonly located in the interior, typically with small middens and associated bedrock mortars.

This period is also marked by increasing social and political complexity and the use of shell beads as currency. During this period, Native American groups first encountered Europeans (Jones et al. 2007). **Figure 3.5-1** is a map showing the location and names of Chumash towns in San Luis Obispo County when the Europeans first arrived.

ETHNOGRAPHY

San Luis Obispo County is located in the area historically occupied by the Obispeño Chumash, Yokuts, and Salinan. These people shared a greater number of cultural traits with their Salinan neighbors to the north than with their Chumash language-group relatives of the Santa Barbara Channel region to the south. Obispeño Chumash hunter-gatherers made a variety of stone, bone, and shell tools and used vegetal materials such as tule balsa for canoes, and various grasses and thatch for construction of houses and sweat lodges.

The center of Obispeño Chumash sociopolitical organization was the village headman. This powerful authority figure waged wars, redistributed food resources and wealth items, resolved internal conflicts, and was rewarded with multiple wives and tributes consisting of food and various goods. During the Mission Period (discussed in more detail below), Native Americans

from 19 coastal villages within a 20-mile radius of Morro Bay were relocated to Mission San Luis Obispo farther inland.

While difficult to calculate due to unknown impact of European disease on the Chumash, the population at the time of contact is estimated to have been between 18,000 and 20,000 people (King 1990). By 1900, their population had dropped to about 200, while current estimates of Chumash people today average around 5,000 (NPS 2014).

The Salinan occupied the mountainous area north of the Chumash in the northwest portion of the county. Semi-sedentary hunter-gatherers, they lived in small groups mainly along rivers and creeks and occasionally along the coast. Subsistence consisted of hunting and gathering, exploiting the environment around them, and using acorns as their staple food. They used a variety of tools, including bows and arrows, handstones and milling stones, mortars and pestles, basketry items, shell fish hooks, bone awls, and spears.

The Salinan traded with the Chumash in the south and the Yokuts to the northeast, often providing a trading stop between the two groups. The Salinan people were not contacted by Europeans until 1769 during the Portola Expedition, at which point the Spanish estimated their population to be around 2,000. During the Mission Period, the Salinans populated the areas near Mission San Antonio de Padua and Mission San Miguel. Like other Native groups, they were decimated by disease until, by 1831, only 700 individuals were recorded (Kroeber 1976). Today, the Salinan Tribe is recognized by the State of California with more than 400 members and has submitted an application for federal recognition.

HISTORY

The Historic Period in California can be divided into three parts: the Spanish Period (1769–850), the Mexican Period (1821–1848) and the American Period 1848–the present). Some of the resource types associated with the Historic Period include but are not limited to any standing structure or building, structure foundations, outhouse pits, trash scatters, wells, canals, ditches, dams, mines, walls, fences, and railroad tracks.

The Spanish began explorations of the California coast in 1542, but long-term exploration of the coast and inland regions did not occur until the Portolá overland expedition in 1769 that stopped in San Luis Obispo near Pismo Beach (Jones et al. 2007). The Chumash were occupying the coastal area, living in a large number of small autonomous groups (Kroeber 1976).

Mission San Luis Obispo de Tolosa was founded by Father Junipero Serra in 1772 and constructed by the local Native American population. In 1805 more than 900 Native Americans lived at the mission. The Santa Margarita de Cortona Asistencia was established in 1787 as an asistencia ("sub-mission") to Mission San Luis Obispo de Tolosa to minister to the large number of Indians who inhabited the area. The facility also served as an outpost, chapel, and storehouse. Additionally, the Mission padres and Indians conducted extensive grain cultivation. Mission San Miguel Arcángel was established 1797 by the Franciscan order, on a site chosen specifically due to the large number of Indians that inhabited the area, whom the Spanish priests wanted to evangelize. The current building, built in 1804, is well known for the original wall paintings by artist Esteban Munras and other Native American artists.

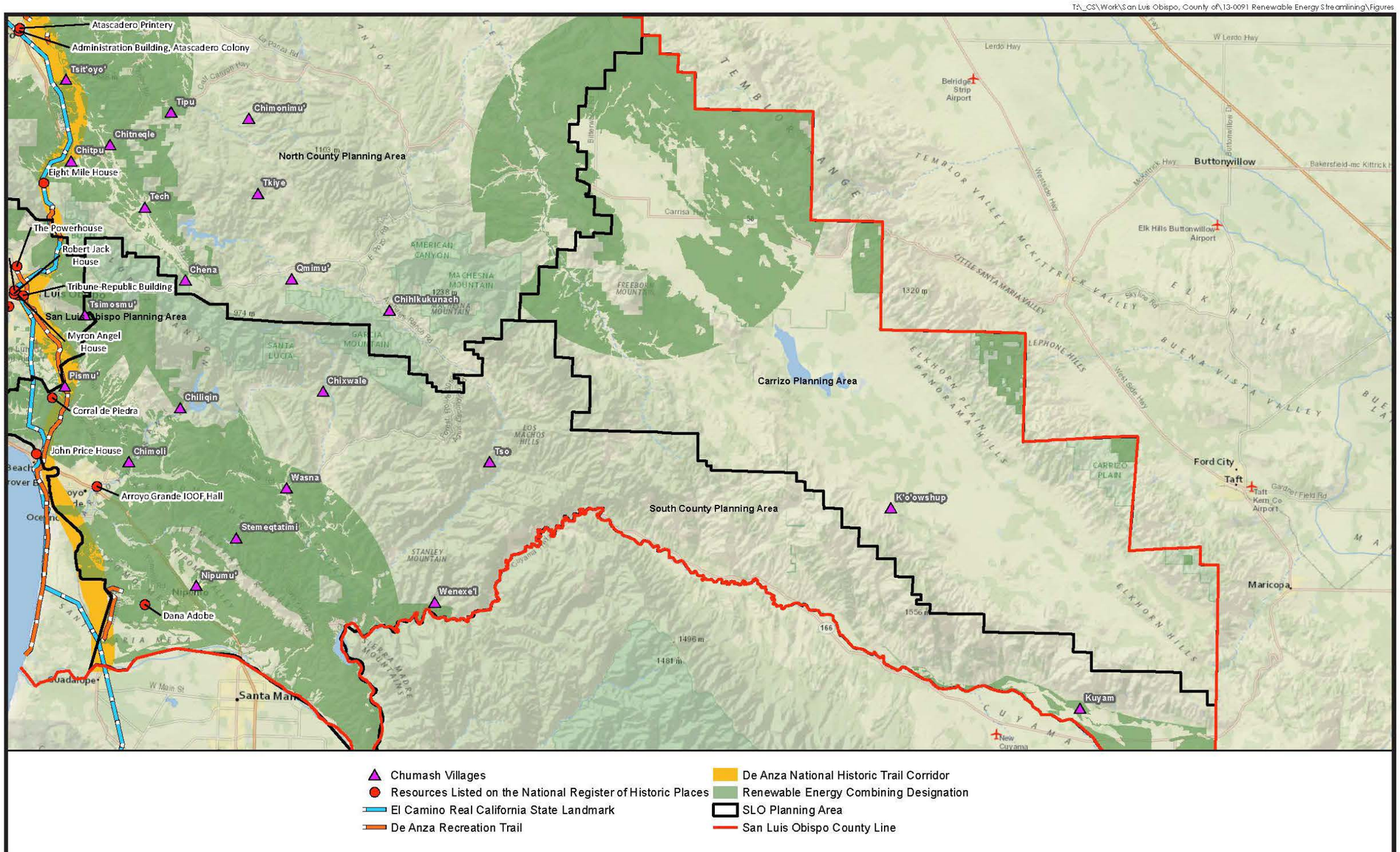

Figure 3.5-1a
Cultural Resources
Carrizo Planning Area

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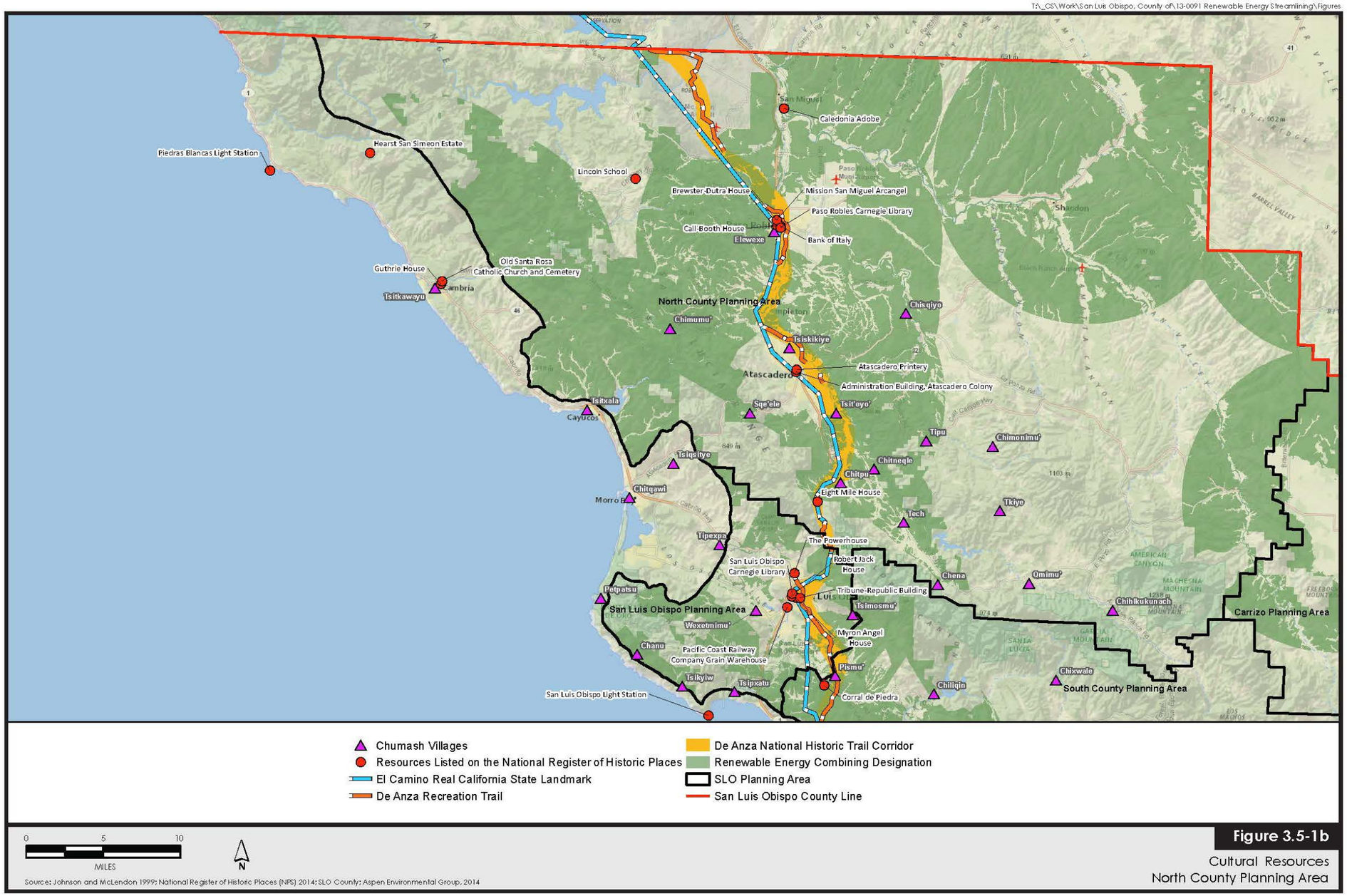
T:_CS\Work\San Luis Obispo, County of\13-0091 Renewable Energy Streamlining\Figures
Piedras Blancas Light Station
Hearst San Simeon Estate
Lincoln School
Caledonia Adobe
Brewster-Dutra House
Mission San Miguel Arcangel
Paso Robles Carnegie Library
Call-Booth House
Elewexe
Bank of Italy
Guthrie House
Old Santa Rosa Catholic Church and Cemetery
Cambria
Tsitkawayu
North County Planning Area
Chimumu'
Chisqiyo
Tsiskikiye
Atascadero
Atascadero Printery
Administration Building, Atascadero Colony
Tsitxala
Cayucos
Sqo'ele
Tsit'oyo'
Tipu
Chimonimu'
Tsiqsitye
Chitneqle
Chitpu
Eight Mile House
Chitqawi
Morro B
Tkiye
Tech
Tipexpa
The Powerhouse
Robert Jack House
San Luis Obispo Carnegie Library
Chena
Omimu'
Tribune-Republic Building
Petpatsu
San Luis Obispo Planning Area
Tsimosmu'
Chihlkukunach
Carrizo Planning Area
Wexetmimu'
Myron Angel House
Chanu
Pacific Coast Railway Company Grain Warehouse
Pismu'
Chixwale
Tsikyiw
Tsipxatu
Chiliqin
South County Planning Area
San Luis Obispo Light Station
Corral de Piedra
Chumash Villages
Resources Listed on the National Register of Historic Places
El Camino Real California State Landmark
De Anza Recreation Trail
De Anza National Historic Trail Corridor
Renewable Energy Combining Designation
SLO Planning Area
San Luis Obispo County Line
0 5 10
MILES
N
Source: Johnson and McLendon 1999; National Register of Historic Places (NPS) 2014; SLO County; Aspen Environmental Group, 2014
Figure 3.5-1b
Cultural Resources
North County Planning Area

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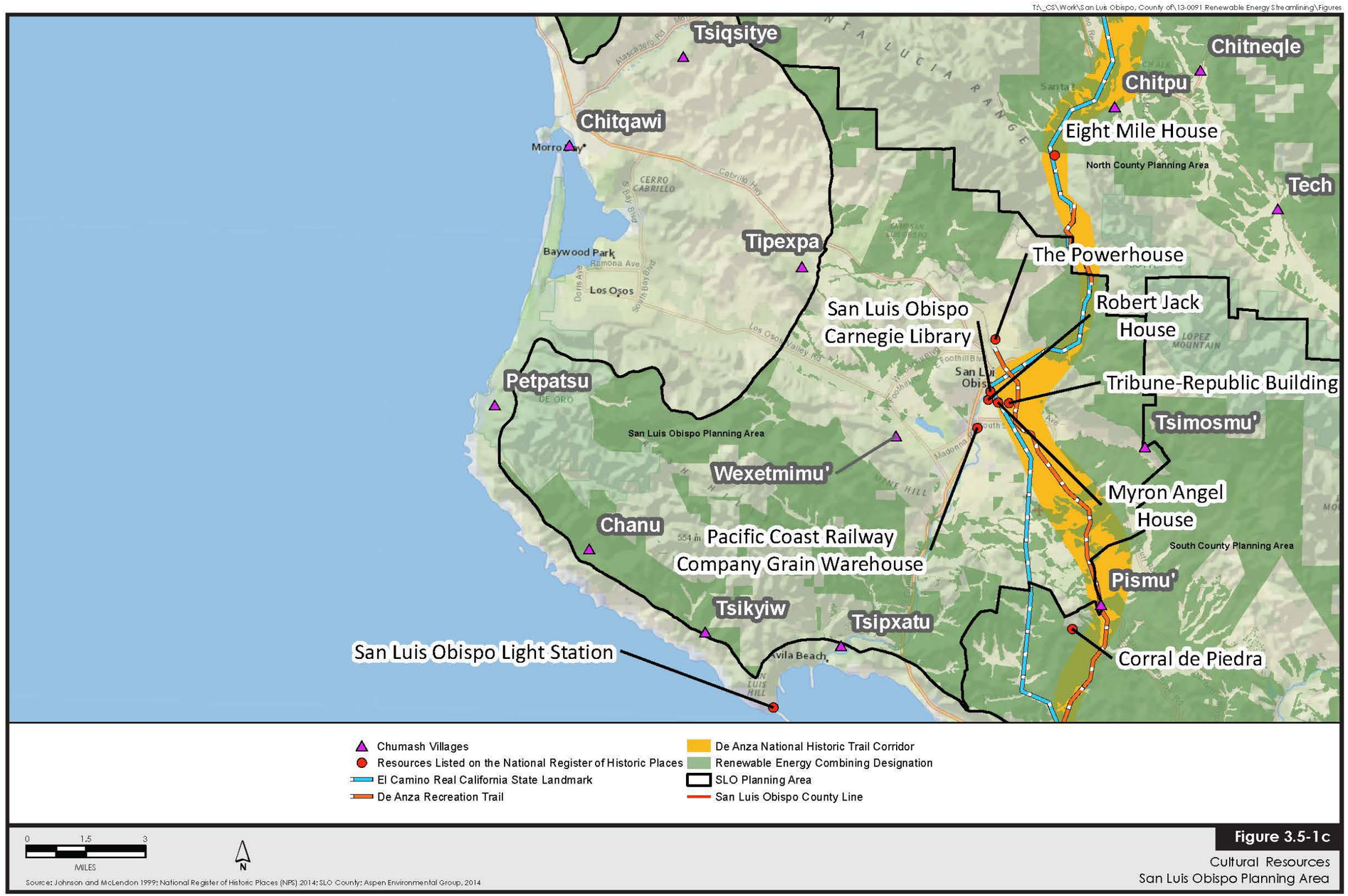

Figure 3.5-1c
Cultural Resources
San Luis Obispo Planning Area

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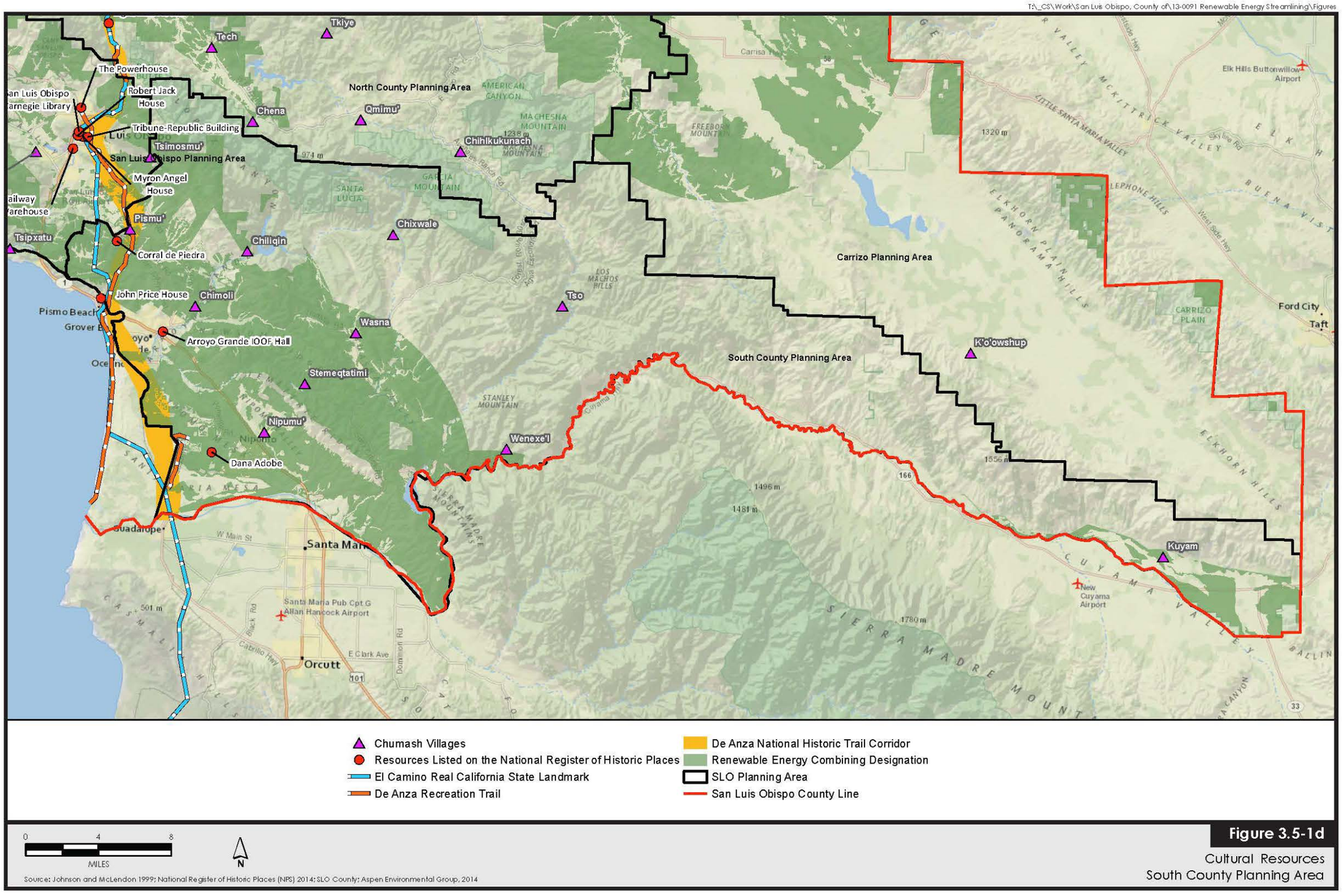

Figure 3.5-1d
Cultural Resources
South County Planning Area

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In 1822, Mexico achieved independence from Spain, and California became an outpost of the Mexican Republic. The Secularization Act of 1833 caused the missions to be disbanded. This allowed Mexican governors to give large land grants to civilians and former military personnel, parceling out the former mission lands into ranchos (Mission San Luis Obispo 2014). Thirty-four land grants were awarded in San Luis Obispo County, mainly along the coast. By the 1840s, there was a steady migration of American settlers into California. Unable to stop the incursion, the Mexican government granted citizenship to all who would pledge to follow Mexican law. Many of these foreigners received land grants on which they established grazing and commercial operations. By this time, disease and the destruction of their native subsistence patterns had decimated the Chumash populations, forcing the remaining population to look for work at the local ranches.

War broke out between the United States and Mexico in May 1846, with some decisive battles occurring in California. The American victory over Mexico was formalized in February 1848 with the signing of the Treaty of Guadalupe Hidalgo, and Mexico ceded all its land holdings north of the Gila and Rio Grande rivers to the United States. In 1848 the discovery of gold at Sutter's Mill in Northern California, near Sacramento, kick-started the California Gold Rush. In 1850 California was granted statehood and its first 27 counties, including San Luis Obispo, were established. The discovery of gold in the La Panza district in the eastern part of the county brought a rush of miners to San Luis Obispo County.

Completion of the transcontinental railroad in 1869 and later the reach of the Southern Pacific Railway and the Atchison, Topeka and Santa Fe Railway into Southern California in 1876–1877 spurred a development boom across the state. The Southern Pacific reached the county in 1901. Another key rail line in the county included the Pacific Coast Railway, constructed in 1876. Shipping and transportation via rail and ship allowed for related business development to take place along the shoreline and interior areas of Southern California. As a result, the ranchos gave way to townsite developments and resort destinations. Today the county is relatively rural with an emphasis on agriculture and tourism.

In the San Luis Obispo County General Plan, historic sites are designated as areas of unique historical significance for land use planning purposes. As discussed previously, all of the historic archaeological sites and buildings in San Luis Obispo County have not been identified. However, the County's Historic Site (H) designations include the locations listed in **Table 3.5-1.**

TABLE 3.5-1
CULTURAL RESOURCES WITH A SAN LUIS OBISPO COUNTY HISTORIC SITE (H) DESIGNATION

Adelaida Cemetery	Los Osos Schoolhouse
Adelaida School (1917)	The Lull House (Cambria)
Adobe Barn – Los Berros	Lyman House (Cuesta Grade)
Arthur Beale House Nitwit Ridge (Cambria)	Marre House (c. 1932) (Avila Beach)
Avila Valley Historic Site	Geneseo School
The Bank of Cambria	Mission San Miguel Archangel
Banning School (El Chorro Park)	Mission Santa Margarita de Cortona Asistencia
Bethel Lutheran Church (Templeton)	Octagon Barn (SLO)
Bianchini House (Cambria)	The Olallieberry Inn (Cambria)
The Bluebird Motel (Cambria)	The Old Santa Rosa Chapel (Cambria)

The Brambles Restaurant (Cambria)	Old St. Joseph's Church (Nipomo)
The Bucket of Blood Saloon (Cambria)	Pacific Crest Railroad Depot Site (Nipomo)
C. H. Philips House (Templeton)	The Paul Squib House (Cambria)
Camozzi's (Cambria)	Port San Luis Lighthouse (1890)
Canet Adobe (Estero)	Porter Ranchhouse (1890)
Captain James Cass House Complex (Cayucos)	Pozo Saloon
Carroll's Blacksmith Shop (Cambria)	Price Adobe (Pismo Beach)
Cayucos Pier	Rancho Huasna (Isaac Sparks Adobe) (1850)
Chandler House-Webster (Creston)	The Red House (Cambria)
Coffee T. Rice House (Oceano)	Rigdon Hall Restaurant (Cambria)
Creston Cemetery	Rinconada School
Creston Community Church	Rios Caledonia Adobe – San Miguel
Dana Adobe (Nipomo)	Robin's Restaurant (Cambria)
Dana Home (Nipomo)	Rotta Winery (Adelaida)
Eight-Mile House & Stagecoach Road (Cuesta Grade)	Runels Home – Dana Street (Nipomo)
Estrella Adobe Church	San Marcos Cemetery (c. 1889) (Adelaida)
The First Presbyterian Church (Cambria)	The Sebastian Store (San Simeon)
Hansen Barn (Bishop Peak)	Soto's Market (Cambria)
Hearst Castle (San Simeon)	Southern Pacific Railroad Depot (Oceano)
Hearst Ranch Headquarters (San Simeon)	Spooner Residence (Montana de Oro)
Heart's Ease (Taylor House) (Cambria)	Tar Springs Ranch (Huasna)
Huasna School (1907)	Temple of the People (Halcyon)
Ian's Restaurant (Cambria)	The Thorndyke House (Cambria)
Independence School (SLO)	Tognazzini General Store (Edna)
J. F. MacGillivray Residence (c. 1879) (Adelaida)	Van Gordon Archaeological Site (Cambria)
The Leffingwell House (Cambria)	Vasquez-Hollister Adobe (Cuesta College)
Linne School	Willow Creek Cemetery (c. 1911) (Adelaida)
Louis Maggetti House (Cambria)	York Mountain Winery (1882–1890)
Los Berros Schoolhouse	

Source: SLO County 2010

PALEONTOLOGY

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. 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 Formation known to occur throughout Central and Southern California. Vertebrate fossils of continental material are usually rare, sporadic, and localized.

3.5.2 REGULATORY SETTING

STATE

The Comprehensive Statewide Historic Preservation Plan provides guidance to the Office of Historic Preservation and the preservation community for the identification, registration, protection, and preservation of important historic resources. It encourages both the consideration of historic preservation during planning activities at the local level and public and professional support for historic preservation. The California Historical Building Code provides regulations for the preservation, restoration, rehabilitation, relocation, or reconstruction of buildings or structures designated as qualified historic buildings or properties. Its intent is to facilitate a cost-effective approach for the preservation and continued use of qualified historic buildings or properties while providing reasonable safety for building occupants and access for persons with disabilities.

California Environmental Quality Act

Under CEQA, public agencies must consider the effects of their actions on both "historical resources" and "unique archaeological resources." Pursuant to Public Resources Code Section 21084.1, 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." Section 21083.2 requires agencies to determine whether proposed project would have effects on unique archaeological resources. As a lead agency, the County is committed identifying and protecting significant resources. "Historical resource" is a term with a defined statutory meaning (Public Resources Code Section 21084.1 and CEQA Guidelines Section 15064.5[a], [b]). The term embraces any resource listed in or determined to be eligible for listing in the California Register of Historical Resources (California Register). Properties of local significance that have been designated under a local preservation ordinance (local landmarks or landmark districts) or that have been identified in a local historical resources inventory may be eligible for listing in the California Register and are presumed to be historical resources for purposes of CEQA unless a preponderance of evidence indicates otherwise (Public Resources Code Section 5024.1 and California Code of Regulations, Title 14, Section 4850). Generally, a structure must be of sufficient age to be able to understand its historical significance. While structures less than 50 years of age may be considered significant if "…it can be demonstrated that sufficient time has passed to understand its historical importance," buildings less than 50 years old are not typically considered eligible for state listing as historic resources (California Code of Regulations Section 4852(d)(2)).

For historic structures, CEQA Guidelines Section 15064.5(b)(3) indicates that a project which follows the Secretary of the Interior's Standards for the Treatment of Historic Properties with Guidelines for Preserving, Rehabilitating, Restoring, and Reconstructing Historic Buildings, or the

Secretary of the Interior's Standards for Rehabilitation and Guidelines for Rehabilitating Historic Buildings shall mitigate impacts to a level of less than significant.

Potential eligibility also rests on the integrity of the resource. Integrity is defined as the retention of the resource's physical identity that existed during its period of significance. Integrity is determined by considering the setting, design, workmanship, materials, location, feeling, and association of the resource.

CEQA also requires lead agencies to consider whether projects will impact unique archaeological resources. Public Resources Code Section 21083.2(g) states:

> *"Unique archaeological resource" means an archaeological artifact, object, or site about which it can be clearly demonstrated that, without merely adding to the current body of knowledge, there is a high probability that it meets any of the following criteria:*

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

Archaeological resources may also qualify as historical resources, and Public Resources Code Section 5024 requires consultation with the Office of Historic Preservation when a project may impact historical resources located on State-owned land.

The Central Coastal Information Center (CCIC), Institute of Archaeology, University of California at Santa Barbara, operated under the State Office of Historic Preservation, is the official repository for all San Luis Obispo County data concerning surveys, site records, excavation reports, and relevant literature. The CCIC provides site location data and/or the exact contents of surveyed sites only to qualified professional cultural resources specialists, who are 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.

California Register of Historic Resources

The California Register of Historic Resources is defined as "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" in Public Resources Code Section 5024.1(a). The Office of Historic Preservation in the California State Parks oversees and administers the California Register. 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 reflect the history of California. The California Register includes resources listed in or formally determined eligible for listing in the National Register, as well as some California State Landmarks and Points of Historical Interest. 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. 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.
- Has yielded, or may be likely to yield, information important in prehistory or history.

Regulations Concerning Native American Heritage

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

> *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 (SB) 18 (2004) requires that prior to the adoption or amendment of a general plan or specific plan, 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. SB 18 provides 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.

Regulations Concerning Human Remains

Disturbance of human remains without the authority of law is a felony (California Health and Safety Code Section 7052). 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 descendants 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 Native American Heritage Commission 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 in the vicinity of 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 Native American Heritage Commission (California Health and Safety Code Section 7052.5c; Public Resources Code Section 5097.98).

LOCAL

San Luis Obispo County General Plan

The County General Plan has several goals and policies designed to support Land Use Ordinances that require protection of historic resources. Some historic resources are also addressed in the Parks and Recreation Element.

The Land Use Element and area plans guide and regulate the identification, registration, protection, and preservation of significant historic resources, specifically with the use of the Historic Site (H) designation for areas of unique historical significance.

Conservation and Open Space Element

As discussed in the Conservation and Open Space Element's (COSE) General Plan Implementation Strategy CR 3.1.1, the County is encouraged to develop a cultural resources preservation ordinance, The cultural resources implementation strategies emphasize measures that are consistent with state and federal law and best practices for the identification and evaluation of cultural resources:

- Most of the suggested measures in the COSE are currently being followed on a case-by-case basis as a part of the CEQA review of land use permits. The COSE also addresses the protection of paleontological resources and recommends the following be applied to land use projects: evaluate the site for resources, and if found monitor, catalog and/or protect this resource.

San Luis Obispo County Land Use Ordinance – Title 22

The Land Use Ordinance (LUO-Inland) provides standards for project design and siting to identify and reduce impacts to historic resources, as well as to limit archaeological impacts during grading.

LUO – General Property Development and Land Use Standards

Section 22.10.040, Archaeological Resources, identifies performance standards in the event unanticipated cultural resources or human remains are discovered during construction activities, as follows:

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

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

B. In the event archeological resources are found to include human remains, or in any other case when human remains are discovered during construction, the county coroner shall be notified in addition to the department so proper disposition may be accomplished.

LUO – Historic Sites (H) Combining Land Use Designation

Within the LUO, the Historic Sites (H) Combining Designation is intended to protect archaeological resources and historic sites, structures, and areas. Approval of a Minor Use Permit is required for all new construction and uses with an H Combining Designation.

Section 22.14.080 states that a land use permit application with an H Combining Designation will be approved only if new uses and alterations to existing uses in this designation are designed in a way that avoids or preserves these resources. This LUO section further requires new development and significant structural remodels to comply with additional permitting and standards. These include protection or appropriate relocation of archaeological resources, and minimization of impacts to historic structures, landmarks, and districts.

LUO – Development Standards for Electricity-Generating Facilities

Section 22.32 requires electricity-generating facilities to submit an environmental quality assurance program addressing construction and operation with applications for Conditional Use Permits. The contents of this plan are determined during the Conditional Use Permit and CEQA process, which considers potential impacts to cultural resources.. Further, Section 22.14.080 requires that these facilities be sited in ways that avoid and/or preserve any cultural resources identified.

LUO – Land Use and Development Permit Procedures

Per Section 22.60.040, all applications for a Site Plan Review, Minor Use Permit, or Conditional Use Permit are subject to inclusion of a professionally prepared cultural resources technical report presenting the results of a pedestrian survey of the proposed project area where the cultural resources that may be impacted by the project are identified.

LUO – Planning and Community Area Standards

In the LUO, Article 9 of Title 22 and other community planning documents require that some types of land use applications or activities in designated areas meet standards to protect cultural resources, in addition to the general LUO standards discussed above. For example, projects in the El Pomar-Estrella Sub-Area located within 100 feet of the bank of a creek (or 300 feet if the slope of the site is less than 10 percent) must conduct an archaeological site survey. If the proposed development is found to have potential impacts on known or potential archaeological resources, a Minor Use Permit and a mitigation plan for the archaeological resources are required.

Summary of Local Regulations and Policies

Table 3.5-2 summarizes regulations and policies from the documents described above, including the County Conservation and Open Space Element and Land Use Ordinance. Information is organized by planning area. The table also identifies where policies or standards only apply to planning areas or specific land use designations.

TABLE 3.5-2
LOCAL POLICIES AND REGULATIONS FOR CULTURAL RESOURCES

Applicable Code Section	Summary
Countywide	
Conservation and Open Space Element, Implementation Strategy CR 1.1.1 Curation	Support existing museums or cultural centers and establish new ones to educate the public about the importance of cultural resources.
Conservation and Open Space Element, Implementation Strategy CR 1.1.2 Curation Facility	Work with stakeholders to locate, construct, and maintain a storage, curation, and research facility for cultural resources.
Conservation and Open Space Element, Implementation Strategy CR 1.1.3 Diversified Funding	Identify and pursue funding for existing and new curation facilities.
Conservation and Open Space Element, Implementation Strategy CR 2.1.1 Public Outreach	Establish a program to publicize the County's efforts to protect historical and cultural resources at risk from development and its commitment to preserve its cultural heritage.
Conservation and Open Space Element, Implementation Strategy CR 2.1.2 Outreach to Schools	Preserve cultural resources by supporting education programs through local historical societies, schools, and other groups.
Conservation and Open Space Element, Implementation Strategy CR 2.1.3 Unauthorized Collection	Protect sensitive sites from vandalism and unauthorized collection of artifacts through education.
Conservation and Open Space Element, Implementation Strategy CR 2.1.4 Interpretive Signage	Require development projects in areas connected with cultural resources to include monuments, plaques, or other signage in order to identify and interpret these resources.
Conservation and Open Space Element, Implementation Strategy CR 2.1.5 Cultural Resources Advisory Committee	Establish a Cultural Resources Advisory Committee to make recommendations to the Board of Supervisors and other decision-making bodies on ways to protect Native American, archaeological, historic, and other cultural resources.
Conservation and Open Space Element, Policy CR 2.2 Acquisition	Encourage and support acquisition by public agencies or historical or conservation organizations of the most important archaeological and cultural sites from willing sellers.
Conservation and Open Space Element, Implementation Strategy CR 2.3.1 Stakeholder Outreach	Support ongoing discussions about protecting and preserving cultural resources with Native American groups, historical and archaeological interest groups, cultural resource professionals, decision makers, and landowners.
Conservation and Open Space Element, Implementation Strategy CR 2.3.2 Government-to-Government Consultation	Establish a government-to-government consultation process with the Native American community and a consultation process with other stakeholders to identify and preserve potentially significant cultural resources.

Applicable Code Section	Summary
Conservation and Open Space Element, Implementation Strategy CR 3.1.1 Historic Preservation Ordinance	The County will develop a cultural resources preservation ordinance to: preserve and protect resources, prevent demolition, integrate historically accurate building designs, promote restoration consistent with the Secretary of the Interior's Standards, and create the Cultural Resources Advisory Committee.
Conservation and Open Space Element, Implementation Strategy CR 3.1.2 Historic Resources Inventory	Develop historic contexts for the county, develop and update a historic resources inventory, using the State of California using Department of Parks and Recreation forms and include location maps.
Conservation and Open Space Element, Implementation Strategy CR 3.1.3 National Register	Pursue formal listing of all eligible sites and properties in the National Register of Historic Places and California Register of Historical Resources, or as California Historic Landmarks.
Conservation and Open Space Element, Implementation Strategy CR 3.1.4 Historic Listing Process	Develop a process to protect newly identified historic sites, buildings, and structures in a timely manner as an alternative to including them in the Historic (H) Combining Designation such as (1) adopt a Historic Preservation Ordinance that includes or references a list, and (2) amend planning area/Land Use Ordinance standards to include such lists for each planning area.
Conservation and Open Space Element, Implementation Strategy CR 3.2.3 Tax Incentives	Share information on federal and state tax incentive programs and nonprofit conservation programs for historic preservation with landowners and preservation groups.
Conservation and Open Space Element, Implementation Strategy CR 3.2.4 Mills Act	Consider participating in the Mills Act Tax Abatement Program starting with research or studies of costs and benefits.
Conservation and Open Space Element, Implementation Strategy CR 3.3.1 Restoration Assistance	Provide property owners and developers with design assistance, including information on the restoration and adaptive reuse of historic buildings and structures.
Conservation and Open Space Element, Implementation Strategy CR 3.3.2 Salvaged Materials	Encourage the reuse of salvaged architecturally significant materials.
Conservation and Open Space Element, Policy CR 4.1 Non-development Activities	Discourage or avoid non-development activities that could damage or destroy Native American and archaeological sites, including off-road vehicle use on or adjacent to known sites. Prohibit unauthorized collection of artifacts.
Conservation and Open Space Element, Policy CR 4.2 Protection of Native American Cultural Sites	Ensure protection of archaeological sites that are culturally significant to Native Americans, even if they have lost their scientific or archaeological integrity through previous disturbance. Protect sites that have religious or spiritual value, even if no artifacts are present. Protect sites that contain artifacts, which may have intrinsic value, even though their archaeological context has been disturbed.
Conservation and Open Space Element, Implementation Strategy CR 4.2.1 Archaeological Sensitivity Mapping	Identify significant archaeological and cultural sites and conduct sensitivity mapping.
Conservation and Open Space Element, Implementation Strategy CR 4.2.2 Archaeological Site Records	Establish and maintain, but do not publicize, archaeological site records. Site records may be released to limited individuals and groups with appropriate professional or tribal credentials.
Conservation and Open Space Element, Implementation Strategy CR 4.3.1 Cultural Landscapes	The identification and interpretation of cultural resources should consider the larger landscape in order to address the relationships between archaeological sites, landscape features and the environment.

Applicable Code Section	Summary
Conservation and Open Space Element, Implementation Strategy CR 4.3.2 Cultural Landscapes: Open Space Easements	In proposed land divisions and discretionary land use permits: (1) locate parcels and easements to optimize protection of cultural resources, (2) as necessary, clearly define allowable uses, prohibited activities, and open space maintenance responsibilities as a condition of approval, and (3) use open space easements to protect designated archaeological sites.
Conservation and Open Space Element, Implementation Strategy CR 4.3.3 Cultural Landscapes: Management	Manage public open space and parkland so that public use does not disturb or degrade archaeological or historical resources.
Conservation and Open Space Element, Implementation Strategy CR 4.4.1 Native American participation in development review process	In areas likely to contain Native American and cultural resources, include Native Americans in tasks such as surveys, resource assessment, and impact mitigation. Consult with Native American representatives early in the development review process and in the design of appropriate mitigations. Enable their presence during archaeological excavation and construction in areas likely to contain cultural resources.
Conservation and Open Space Element, Implementation Strategy CR 4.4.2 Cultural Resource Studies	Require cultural resources studies (i.e., archaeological and historical by a professional who meets the Secretary of the Interior's Professional Qualifications Standards when development is proposed within an archaeologically or historically sensitive area. These studies will conform to the County's approved guidelines.
Conservation and Open Space Element, Implementation Strategy CR 4.6.1 Resource-Based Surveys	Require a preliminary site survey with all development subject to a discretionary permit near water, near significant rock outcrops or ridge tops, or with a slope of less than 10 percent. Require that a professional archaeologist who meets the Secretary of the Interior's Professional Qualifications for Archaeology conduct the preliminary survey. Recommendations made by the archaeologist may be applied as mitigation measures.
Title 22, Section 22.10.040. A	In the event archeological resources are unearthed or discovered during any construction activities, construction activities shall cease, and the department shall be notified so that the extent and location of discovered materials may be recorded by a qualified archaeologist, and disposition of artifacts may be accomplished in accordance with state and federal law.
Title 22, Section 22.10.040. B	In the event archeological resources are found to include human remains, or in any other case when human remains are discovered during construction, the county coroner shall be notified in addition to the department so proper disposition may be accomplished.
Title 22, Section 22.14.080	New parcels containing an existing structure under a Historic Site (H) Combining Designation must be determined by a Conditional Use Permit. Parcels smaller than the minimum required by the underlying land use category can only be transferred to a tax-exempt charity or public agency.
Title 22, Section 22.14.080.C.1	Any new structure or use, or substantial restoration or alteration, for a parcel under a Historic Site (H) Combining Designation requires a Minor Use Permit.
Title 22, Section 22.14.080.C.4	Land use permit applications for sites under a Historic Site (H) Combining Designation must protect the integrity of any cultural resources to the extent possible.
Title 22, Section 22.60.040.D.2	Applications for a Site Plan Review, Minor Use Permit, or Conditional Use Permit must include an archaeological surface search prepared by a qualified individual, unless waived by the director.

Applicable Code Section	Summary
Carrizo Planning Area	
No additional policies or code specific to the Carrizo Planning Area.	
North County Planning Area	
Shandon Community Plan, 4.6 CRP-1	Protect and preserve archaeological resources, paleontological resources, and significant historic resources to the maximum extent feasible.
Shandon Community Plan, 4.6 CRP-2	Protect and preserve trees with historic significance and cultural heritage value.
Title 22, Section 22.104.060.A	Applications for a land use permit, grading, or construction in San Miguel must submit a cultural resource report.
Title 22, Section 22.94.020.A	Within the El Pomar-Estrella planning area, all discretionary land use permit applications within 100 or 300 feet of a creek shall conduct a preliminary site survey. Projects with potential impacts on a known or potential archaeological resource shall require a Minor Use Permit and a mitigation program.
Title 22, Section 22.96.020.B	Any projects in the San Luis Obispo North planning area involving a historic structure or located within 200 feet of a historic structure shall require a Minor Use Permit.
San Luis Obispo Planning Area	
No additional policies or code specific to the San Luis Obispo Planning Area.	
South County Planning Area	
Title 22, Section 22.98.072.C-4	Specific parcels in the South County Planning Area must include a cultural resource evaluation with a land use permit application.
Title 22, Section 22.98.072.H.14.e	Projects on identified land near West El Campo Road in the South County Planning Area must conduct an archaeological and historic surface survey prior to application submittal. If resources are discovered, the plan must be redesigned to avoid disturbing the resources or mitigate impacts.
Title 22, Section 22.98.072.H.9	Projects on specific parcels near Summit Station Road in the South County Planning Area must prepare an archaeological and historic resources surface survey if the project involves any ground disturbance.
Title 22, Section 22.98.072.I	Selected parcels near Hutton Road in the South County Planning Area must include an archaeological survey or evaluation prior to completing an application for any new development.

3.5.3 IMPACTS AND MITIGATION MEASURES

THRESHOLDS OF SIGNIFICANCE

Based on Appendix G of the CEQA Guidelines, a cultural resource impact is considered significant if implementation of the RESP would:

1) Cause a substantial adverse change in the significance of a historic resource [as defined in Public Resources Code Section 21084.1].

2) Cause a substantial adverse change in the significance of an archaeological resource [as defined in Public Resources Code Section 21083.2].

3) Disturb any human remains including those interred outside formal cemeteries.

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

PROJECT IMPACTS AND MITIGATION MEASURES

Impacts Associated with Structure-Mounted Facilities

Accessory renewable energy-generating facilities, some Tier 1 solar electric facilities (SEFs), and all Tier 1 wind energy conversion systems (WECS) may be mounted on existing buildings and structures. If a structure is more than 45 years of age and is considered a historical resource under CEQA, then significant impacts to this resource are possible. Some types of impacts associated with the installation of these facilities include damage to the structural integrity of a building as a result of vibration associated with construction, and impacts to the setting and character of a building with the addition of energy-generating equipment. Impacts associated with operation, maintenance, and decommissioning are likely to be minimal. These types of projects tend to have short-term temporary impacts to cultural resources and as such are good candidates for streamlining.

Impacts Associated with Ground-Mounted Facilities

Ground-mounted facilities may include Tier 1, 2, and 3 SEFs. Some of the activities associated with construction of these facilities that might impact cultural resources include construction of staging areas and access roads, grading and vegetation clearing, foundation excavations for solar PV structures and other structures, security fence installation, installation of both temporary and permanent drainage and erosion control measures, and decommissioning activities.

Each activity that results in surface and subsurface disturbance has the potential to damage cultural resources. Other impacts could include increased access to resources that might result in trampling artifacts, creating tracks and dust from recreational vehicles, illegally collecting artifacts, and inadvertently damaging unrecognized resources. Fugitive dust from construction vehicles and heavy equipment could degrade the research value and condition of rock art (if this type of resources is found on-site or immediately adjacent) and by adversely affecting the patina/petroglyph contrast or damaging the pictograph pigments. Erosion of soils, project runoff, and oil or other contaminant spills could cause damage to cultural resources located both within the project footprint and in areas either downslope or downstream. Additionally, long-term impacts could result from the long-term presence of renewable energy structures. These changes to the visual setting could affect the value of buildings and structures, cultural landscapes, and other cultural resources for which the visual setting is an important component of a resource's significance.

Fewer physical impacts to cultural resources would occur from the operation and maintenance of renewable energy projects, as the environment is expected to remain stable. Vegetation management and dust control will still be required; however, the frequency and duration of these activities will be much less than during the initial construction.

Decommissioning of a renewable energy project can be divided into two broad categories: removal of structures and restoration of the land. The removal of project structures would involve removal of all aboveground facilities (e.g., solar photovoltaic arrays) as well as graveled or paved work pads and roads. Cultural resources could be affected by the removal of subsurface facilities (e.g., footings and building foundations). Laydown areas would be established for

decommissioning. Impacts to cultural resources from the removal of structures would be similar to those described for project construction, as long as laydown areas and other decommissioning activities are not located within the original project footprint. If access roads are left in place and if there are cultural resources associated with the project, impacts to cultural resources from increased human access would be similar to those described for the creation of new access roads. The damage to these resources may increase during this phase because the area would no longer be periodically monitored.

Examples of activities related to restoration and revegetation include remediation of spills and contaminated soils, reseeding of the project site, and removal of all gravel work pads and paving. Impacts to cultural resources from the restoration and revegetation of a project site are unlikely because resources in the areas slated for restoration and revegetation would have been accounted for during the earlier phases of project development.

Cause a Substantial Adverse Change in the Significance of a Historical Resource (Threshold 1)

Roof-mounted Tier 1 SEF and WECS projects could affect buildings eligible for historic resources listing if the buildings are more than 50 years old. Construction and operation of ground-mounted Tier 1 and Tier 2 facilities within the combining designation could affect historic, cultural, and paleontological resources through grading of land, construction of roadways, and trenching necessary to support the facilities. Existing LUO regulation 22.10.040 regulates the inadvertent discovery of human remains during construction and ensures that the remains are handled appropriately.

For Tier 2 and above projects, the discretionary process associated with consideration of either a Minor or Conditional Use Permit will involve site-specific cultural analysis as part of the project-specific CEQA analysis. Should resources be discovered, the project-specific analysis will recommend a project-specific mitigation strategy.

Impact 3-5-1 – Solar Implementation of the proposed Program could cause a substantial adverse change in the significance of a historical resource. This impact is considered **less than significant (Class III)**.

Tier 1 solar electric facilities (SEFs) will be mounted on existing buildings and structures or on previously disturbed land. As some of the structures eligible for roof-mounted systems will be 50 years of age or older, it is possible that the historic integrity of the building may be diminished. This could occur as the energy-generating equipment would be an obvious change on the roof. This change could affect the historic setting of the roof or otherwise affect the features that could contribute to eligibility for listing as a historic resource. Proposed performance standard 22.32.050.D.2 for roof-mounted Tier 1 SEF projects require that the equipment be designed to be removed at a later date and that the roof can be returned to its original pre-project condition. As the change to the roof to install the equipment is temporary and the equipment can be removed and the building's roof restored, this impact is considered **less than significant (Class III)**.

In the case of ground-mounted Tier 2 and 3 SEF projects within the RE Combining Designation, as required by proposed performance standard 22.14.100.F.7, a Cultural Resources Report would be required for projects on undisturbed areas with no previous grading, fill, development or site improvements. Where the Cultural Resources Report identifies any potential resources, the applicant would also submit the following (1) One hundred percent (100%) field survey of the proposed project area where all identified resources are recorded on forms required by the

State Historic Preservation Officer (SHPO), (2) correspondence with Native American contacts provided by the Native American Heritage Commission (NAHC) and a search of the sacred lands database maintained by the NAHC to identify sensitive resources, and (3) a technical report presenting the results of these studies, the identification of any resources that might be historic resources, and management and treatment recommendations for these resources in a report format meeting SHPO guidelines to identify measures the project would employ to avoid direct or indirect impacts to any potential resources. Projects which cannot demonstrate that they meet the above requirements would require project-level CEQA review outside the scope of the RESP.

Proposed performance standard 22.14.100.F.7.c would reduce potential impacts to known historical resources. Impacts to any inadvertently discovered cultural resources or human remains would be addressed through 22.10.040.A and B. Therefore, this impact is considered **less than significant (Class III).**

Impact 3-5-1 – Wind Implementation of the proposed Program could cause a substantial adverse change in the significance of a historical resource. This impact is considered **less than significant (Class III)**.

Tier 1 WECS projects would be roof mounted and would be subject to proposed performance standard section 22.32.060.D.2 that requires equipment be designed to be removed. This performance standard is needed as the energy-generating equipment would be an obvious change on the roof. This change could affect the historic setting of the roof or otherwise affect the features that could contribute to eligibility for listing as a historic resource. Ground-mounted Tier 1 WECS projects would be located on previously disturbed soils and subject to LUO 22.10.040 regulating the discovery of human remains.

Tier 2 and above WECS projects are ground mounted and would be subject to either a Minor or Conditional Use Permit. These discretionary permits would require a cultural resources survey of the site with project-specific mitigation.

Implementation of existing LUO 22.10.040 regarding the discovery of human remains, and proposed performance standard 22.32.060.D.2 that ensures roof mounted equipment can be removed from older buildings, and the requirement to conduct a site-specific cultural resource study for projects on undisturbed soils will ensure that all cultural resource impacts will be addressed. This impact is considered **less than significant (Class III).**

Impact 3-5-1 – Policy Changes Implementation of the proposed Program could result in changes to countywide policies that could cause a substantial adverse change in the significance of a historical resource. This impact is considered **less than significant (Class III)**.

Policy changes would clarify existing policies and standards related to Tier 1 SEF and WECS renewable energy development projects throughout the proposed RE combining designation and the unincorporated, non-Coastal Zone areas of the county. Tier 2 projects within the combining designation would also be streamlined by providing a series of performance standards that if followed would lead to approval of the projects up to 160 acres in size. Tier 2 and above projects outside of the combining designation would be required to obtain either a Minor or Conditional Use Permit. Both permits are discretionary and would require independent site analysis and CEQA review. Through application of the existing LUO and the proposed

performance standards, potential impacts to cultural resources are considered **less than significant (Class III).**

Cause a Substantial Adverse Change in the Significance of an Archaeological Resource (Threshold 2)

Construction and operation of solar and wind energy projects could cause a substantial adverse change in the significance of unique or other archaeological resources as defined by CEQA. Ground disturbance associated with construction of projects may result in the destruction of these resources. While some construction methods may involve minimal changes to the environment (e.g., driving individual posts to hold SEF or WECS equipment rather than grading of the land), all of the proposed SEF and WECS projects will involve some form of ground disturbance if for no other purpose than to gain site access.

Impact 3-5-2 – Solar Implementation of the proposed Program could cause a substantial adverse change in the significance of an archaeological resource. This impact is considered **less than significant (Class III)**.

Tier 1 SEF projects that will be located on rooftops will have no potential to impact archaeological resources, as there would be little to no ground disturbance. In most instances, Tier 1 SEF projects on existing buildings will use existing electrical services. LUO Section 22.10.040 provides standards for the discovery of human remains should that occur during any trenching.

For ground-mounted Tier 1 SEFs, performance standard 22.32.050.A.3 requires that the area be previously disturbed, which eliminates the potential for disturbing archaeological resources at the surface. LUO Section 22.10.040 provides standards for the discovery of human remains should that occur during any trenching or excavation.

For Tier 2 projects on undisturbed land or any project outside of the combining district, additional cultural resources analysis must accompany the application. As the proposed Program will either avoid any ground disturbance by design or will require site-specific analysis as a performance measure, this impact is considered **less than significant (Class III)**.

Impact 3-5-2 – Wind Implementation of the proposed Program could cause a substantial adverse change in the significance of an archaeological resource. This impact is considered **less than significant (Class III)**.

As with SEF projects, Tier 1 WECS projects will either be located on a rooftop or on previously disturbed soils. Tier 2 and above WECS projects located on undisturbed soils within the combining designation are required to obtain either a Minor or Conditional Use Permit. Consideration of these discretionary permits will require a CEQA analysis that will include a cultural resource study. This impact is considered **less than significant (Class III)**.

Impact 3-5-2 – Policy Changes Implementation of the proposed Program could result in changes to countywide policies that could cause a substantial adverse change in the significance of archaeological resources. This impact is considered **less than significant (Class III)**.

As described under Threshold 1, adherence to policy changes proposed under the RESP would minimize impacts to cultural resources. This impact is considered **less than significant (Class III)**.

Disturb Any Human Remains Including Those Interred Outside Formal Cemeteries (Threshold 3)

Grading and trenching of land to allow the construction of SEF or WECS projects could disturb human remains. LUO Section 22.10.140 establishes requirements for the discovery of human remains during construction.

Impact 3-5-3 – Solar Implementation of the proposed Program could disturb human remains. This impact is considered **less than significant (Class III)**.

Tier 1 and Tier 2 SEF projects within the combining designation will either be roof mounted or directed to areas where the ground has been previously disturbed. Projects on undisturbed soils and Tier 2 and above projects outside of the combining designation will be required to conduct project-specific cultural analysis. While there is a potential for human remains to be discovered during grading or trenching activities, LUO Section 22.10.040 establishes a procedure to be followed if remains are discovered. The California Environmental Quality Act Section 15064.5(e) establishes a process to be followed if the coroner believes that the remains are Native American. Therefore, this impact is considered **less than significant (Class III)**.

Impact 3-5-3 – Wind Implementation of the proposed Program could disturb human remains. This impact is considered **less than significant (Class III)**.

Tier 1 WECS projects within the combining designation will be roof mounted. Projects on undisturbed soils and Tier 2 and above projects outside of the combining designation will be required to conduct project-specific cultural analysis. While there is a potential for human remains to be discovered during grading or trenching activities, LUO Section 22.10.040 establishes a procedure to be followed if remains are discovered. The California Environmental Quality Act Section 15064.5(e) also establishes a process to be followed if the coroner believes that the remains are Native American. Therefore, this impact is considered **less than significant (Class III).**

Impact 3-5-3 – Policy Changes Implementation of the proposed Program could result in changes to countywide policies that could disturb human remains. This impact is considered **less than significant (Class III)**.

Policy changes proposed with the project would streamline renewable energy projects within the combining designation. Tier 1 projects could occur throughout the county, but would either be roof mounted and therefore unlikely to disturbed buried remains, or directed to previously disturbed areas and subject to LUO Section 22.10.040 governing the discovery of human remains and also to Section xxxx of the Public Resources Code for the discovery of Native American remains. None of the proposed policy changes would circumvent the existing regulations concerning human remains. This impact is considered **less than significant (Class III)**.

Cause a Substantial Adverse Change in the Significance of a Paleontological Resource (Threshold 4)

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 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. Construction that could result in drilling or trenching through bedrock could result in impacts to paleontological resources.

Impact 3-5-4 – Solar

Implementation of the proposed Program could cause a substantial adverse change in the significance of a paleontological resource. This impact is considered **less than significant (Class III)**.

Tier 1 SEFs would consist of photovoltaic panels mounted on rooftops of other structures as well as small to medium-sized ground-mounted systems. Rooftop installations would have no impact on paleontological resources. Ground-mounted systems would either be directed to disturbed soils or require additional study with Site Plan Review. Unless the bedrock is exposed, the potential for impact may not be known until trenching or soils information associated with construction materials is provided. Because of the cost of constructing in bedrock and the abundance of areas where bedrock can be avoided, it is very unlikely that ground-mounted SEF projects would encounter paleontological resources. All ground-mounted renewable energy facilities would avoid exposed bedrock, rock outcrops, or significant ridgetops as directed by proposed standards 22.32.040.C.4. This impact is considered **less than significant (Class III)**.

Impact 3-5-4 – Wind

Implementation of the proposed Program could cause a substantial adverse change in the significance of a paleontological resource. This impact is considered **less than significant (Class III)**.

The proposed Program would allow WECS facilities that are mounted to rooftops of existing structures. Small-scale wind projects generally comprise a rotor, generator, or alternator mounted on a frame, a tail, and a tower. Construction of these facilities would occur entirely on top of a pre-existing structure, based on the criteria for Tier 1 WECS proposed in 22.32.030.A.3. Construction activities would include drilling, hammering, installation, and other activities, but they would be confined to the built environment footprint or a nearby laydown area and aboveground. Therefore, these facilities would not negatively affect paleontological resources.

Construction of footings to support towers could affect resources, as excavation may encounter bedrock. As part of the engineering approval process, the County would require submission of a geotechnical study that will identify the soils types and the potential to encounter bedrock. As projects of this size will also require a Minor or Conditional Use Permit and accompanying CEQA that will include preparation of a cultural resources study, appropriate requirements can be made to either avoid the bedrock or provide monitoring during excavation. As these provisions are already in place or would be applied as part of either the Minor or Conditional Use Permit, there is no need for mitigation. This impact is considered **less than significant (Class III)**.

Impact 3-5-4 – Policy Changes

Implementation of the proposed Program could result in changes to countywide policies that could cause a substantial adverse change in the significance of a paleontological resource. This impact is considered **less than significant (Class III)**.

The proposed policy changes would streamline the construction of rooftop SEF and WECS projects that could not have any impact on paleontological resources. The proposed Program also allows for streamlining of ground-mounted equipment and includes a performance standard that either directs this equipment to previously disturbed areas or requires preparation of a cultural and paleontological resources analysis. This impact would be **less than significant (Class III)**.

CUMULATIVE IMPACTS

The geographic scope for cumulative analysis for cultural and paleontological resources encompasses the entire county, as even localized impacts to these resources are important at a regional scale. Renewable energy projects streamlined by the RESP would generally have minimal impacts to cultural/paleontological resources, as they would be roof mounted or on previously disturbed soils. Compliance with the proposed performance standards described above would ensure that renewable energy projects streamlined under the RESP avoid or minimize impacts to cultural and paleontological resources.

For larger projects, including those on undisturbed soils, both performance standards proposed with the RESP and the discretionary Minor and Conditional Use Permit process will evaluate project-specific impacts. This is essential because there is no way of knowing where these projects will be located; therefore, it is not possible to conduct studies and establish site-specific measures for addressing any potential impacts. Countywide conditions, programs, and projections, in combination with the proposed Program, would not result in a significant cumulative impact to cultural resources. The RESP's contribution to the impact would not be cumulatively considerable.

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3.6 Geology and Soils

This section focuses on the potential for construction and operation of renewable energy projects proposed under the Program to result in soils- and geologic-related impacts and possible loss of access to mineral resources. Issues of liquefaction potential, landslide risk potential, erosion, soil suitability, and earthquake damage potential will be addressed.

3.6.1 PHYSICAL SETTING

GEOLOGY AND TOPOGRAPHY

San Luis Obispo County is located within the southern portion of the Coast Ranges Geomorphic Province (Coast Ranges), which encompasses northwest-trending mountain ranges and valleys that are roughly parallel to the Great Central Valley and Sierra Nevada range. To the east, the county is bordered by the Temblor Range. Other mountain ranges which traverse the county include the Santa Lucia Range, the Caliente Range, the La Panza Range, and the San Luis Range. The southwest portion of the county consists of the Carrizo Plain, which lies between the Temblor Range and the Caliente Range. The Sierra Madre Mountains border the southern portion of the county. Narrow valleys are interspersed between these mountain ranges. They include the Cholame Valley, Shandon Valley, Huasna Valley, Los Osos Valley, and Santa Maria Valley. The bedrock of the southern Coast Ranges consists of a complex mosaic of Mesozoic and Cenozoic rock bodies that existed in this area during the Jurrassic, Cretaceous, and early Tertiary periods (DeCourten 2010).

Soils

The Natural Resources Conservation Service has mapped over 423 individual soil types in San Luis Obispo County. These soil types are grouped into 144 soil series. Soil types and soil series reveal valuable information regarding soil characteristics that are important to keep in mind when siting renewable energy facilities. These characteristics include expansive soils, erosive soils, and soils corrosive to steel or concrete (SLO County 2013).

Expansive Soils

Expansive soils are characterized by their ability to undergo significant volume change based on variations in soil moisture content. Expansive soils are typically fine grained with a high percentage of clay, which is subject to expanding and contracting as soil moisture content fluctuates. Based on the degree of expansion and contraction, damage may occur to building foundations, concrete flatwork, and asphalt or concrete pavements.

Within the county, there are 134,221 acres of soil with a high shrink-swell potential, 721,063 acres with a moderate shrink-swell potential, and 1,171,627 acres with a low shrink-swell potential. Soils with a high shrink-swell potential are located primarily in the lower elevations of the county's coastal regions. Soils with a moderate shrink-swell potential are located primarily in the northern and mountainous coastal regions (SLO County 2013).

Soil Erosion

Soil erosion occurs when wind or water push fine-grained soil components out of place. Soil texture is the primary factor in determining a soil's erodibility. Soil texture types dominated by silt and very fine sand are the most highly erodible since soil particles are not bound together and are easily detached. Aggregated soils that are more closely bound together are less erodible since their particles can better resist action from wind and water. The quantity of soil lost by

water or wind erosion is influenced by a range of factors including soil texture, soil structure, vegetation cover, permeability, land use, topography, and climate.

There are 686,715 acres of soil in the county classified as having a high susceptibility to wind erosion (Wind Erodibility Groups 6–8). This acreage is located primarily in higher elevations in the eastern and western portions of the county, as well as in the county's central region. Approximately 682,677 acres of land have a moderate susceptibility to wind erosion (Wind Erodibility Groups 4, 4L, and 5). These lands are located primarily in the Santa Lucia Range, the Temblor Range, and the northern portion of the county (SLO County 2013).

Based on soil texture, 31,846 acres of land are deemed highly susceptible to water erosion and 1,182,082 acres of land are deemed moderately susceptible to water erosion. Soils highly susceptible to water erosion are located primarily in the lower elevations of the Carrizo Plain in the vicinity of Soda Lake. Soils with moderate susceptibility to water erosion are located along the slopes of the Temblor, Santa Lucia, Caliente, La Panza, and San Luis Mountain ranges (SLO County 2013).

Corrosive Soils

Based on its chemical composition, soil can be identified as corrosive to steel or concrete. Soil resistivity is the soil's ability to allow electrons to move through it. A low resistivity means a soil is a good conductor. A soil with resistivity less than 5,000 Ohm-centimeters is considered highly corrosive to ungalvanized steel, while soils with a resistivity between 5,000 to 10,000 Ohm-centimeters are considered mildly corrosive.

In San Luis Obispo County, 49,824 acres of soils are identified as highly corrosive to concrete and 561,832 acres of soils are identified as highly corrosive to steel. Soils identified as moderately corrosive to steel are located primarily in the county's eastern portion of the county. Soils identified as highly corrosive to steel are located primarily in the northern portion. In addition, 431,356 acres of soils are identified as moderately corrosive to concrete and 693,456 acres of soils are identified as moderately corrosive to steel. Soils identified as moderately corrosive to concrete are located primarily in the northwestern and southeastern portion of the county. Soils identified as highly corrosive to concrete are located primarily in the Soda Lake area (NRCS 2014; SLO County 2013).

Subsidence

Land subsidence normally results from fluid withdrawal occurring from groundwater pumping, oil extraction, or geothermal generation (Lofgren and Ireland 1973). Fluid removal can create subsurface voids that result in the sinking of the ground surface and loss of permeability in the soil. Subsidence resulting from shifting earth plates can also occur over large areas.

Faulting and Seismicity

Earthquakes are the result of an abrupt release of energy stored in the earth. This energy is generated from the forces that cause the continents to change their relative position on the earth's surface, a process called "continental drift." The earth's outer shell is composed of a number of relatively rigid plates that move slowly over the comparatively fluid molten layer below. The boundaries between plates are where the more active geologic processes take place. Earthquakes are an incidental product of these processes.

Active Faults

An "active" fault is one that shows displacement within the last 11,000 years and therefore is considered more likely to generate a future earthquake. The 1994 Alquist-Priolo Earthquake Fault Zoning Act requires the California State Geologist to establish regulatory zones (now known as Earthquake Fault Zones; prior to 1994, these zones were known as Special Studies Zones) around the surface traces of active faults that pose a risk of surface ground rupture and to issue appropriate maps in order to mitigate the hazard of surface faulting to structures for human occupancy.

According to the Geologic Map of California (CGS 2010a), the Fault Activity Map of California (CGS 2010b), and Fault Evaluation Report FER-200 (CGS 1989), two active fault zones traverse the county (and are within the four planning areas): the San Andreas Fault Zone and the Los Osos Fault Zone. The San Andreas Fault Zone spans approximately 54 miles of the southeastern portion of San Luis Obispo County, running along the western base of the Temblor Range through the Carrizo National Monument.

Other potentially active fault lines run roughly parallel on both the eastern and western sides of the San Andreas fault, the longest of which is approximately 24 miles (SLO County 2013). The Los Osos Fault Zone is a complex set of fault segments comprising the Edna, Huasana, and Oceanic fault zones that traverse the San Luis Obispo Planning Area. Both of these fault zones are Alquist-Priolo Fault Zones, meaning they pose a risk of surface ground rupture as evidenced by previous visible and documented surface fault ruptures along portions of the faults (CGS 1989).

Landslides

Landslides and slope instability can occur as a result of wet weather, weak soils, improper grading, improper drainage, steep slopes, adverse geologic structure, earthquakes, or a combination of these factors. Slope instability can occur in the form of creep slumps, large progressive translation or rotational failures, rockfall, debris flows, or erosion. Landsliding is a potential hazard in San Luis Obispo County due to topography that is dominated by mountain ranges interspersed with narrow valleys.

Within the county, 619,010 acres of land have moderate potential for landsliding, located primarily in narrow valleys throughout the county. There are 989,641 acres of land with high potential for landsliding, which are located along the western face of the Temblor Range, the eastern and western slopes of the Caliente Range, and the eastern and western slopes of the Santa Lucia Range. In addition, 38,089 acres of land have a very high potential for landsliding, located primarily in the higher elevation areas of the Santa Lucia Range and the Temblor Range (SLO County 2013).

Liquefaction

Liquefaction is the sudden loss of soil strength due to a rapid increase in soil pore water pressures resulting from ground shaking during an earthquake. Seismic settlement is the reduction of volume in a saturated or unsaturated soil mass due to ground shaking during a seismic event. Within the county, there are approximately 42,984 acres of soils that are at high risk for liquefaction and 341,630 acres of soils that are at moderate risk for liquefaction. Moderate risk areas are located primarily in the narrow valleys throughout the county, while high risk areas are located primarily along the Coastal Zone (SLO County 2013).

Mineral Resources

Within San Luis Obispo County, combining designations EX and EX1 signify Energy and Extractive Resource Areas (EX) and Extractive Resource Areas (EX1), respectively. Energy and Extractive Resource Areas identify areas of the county where there are known mineral or petroleum resource as recognized by the state or areas where major public utility electric generation facilities are proposed (SLO County 2014a). Surface mines and/or oil fields have been developed within these areas.

The county has seven Energy and Extractive Resource Areas. They include Guadalupe Oil Fields, Huerhuero Creek, Lime Mountain Mine, Klau Mine, Diablo Canyon Nuclear Power Plant, Arroyo Grande (Price Canyon-Ormonde Road) Oilfield, and Standard Oil Company Tank Farm (SLO County 2013).

Extractive Resource Areas (EX1) identify areas of the county classified by the California Department of Conservation's Division of Mines and Geology as containing or being likely to contain significant mineral deposits. San Luis Obispo County has six such areas. These include two EX1 designations along the Salinas River in the central region of the county (SLO County 2014a). EX1 areas are also located near Alamo Creek and the Santa Maria River in the southern portion of the county. Other EX1 areas include La Panza Granitics and along the Navajo Creek in the central portion of the county (SLO County 2013).

CARRIZO PLANNING AREA

Geology and Topography

The Carrizo Planning Area is located in the southeastern portion of San Luis Obispo County. It is bordered by the Temblor Range on the east and the Caliente Range on the west, with the Carrizo Plain running through the majority of the central portion of the planning area. Other notable topographic features are Freeborn Mountain in the Caliente Range, at an elevation of 3,315 feet, and the Elkhorn and Panaroma hills, located near the Temblor Range (DeCourten 2010).

The predominant geologic units in the Carrizo Planning Area include undifferentiated alluvium, which underlies the majority of the Carrizo Plain. The Paso Robles Formation underlies much of the eastern portion of the planning area. The Vaqueros Formation and sandstone and clay shale conglomerates underlie much of the western portion of the planning area (SLO County 2013).

Soils

The predominant soil textures found in this planning area include limy upland, loamy bottomland, and loamy upland.

Expansive Soils

The Carrizo Planning Area has 14,057 acres of soils with a high shrink-swell potential, located primarily in the Carrizo Plain around Soda Lake. There are 107,271 acres of soil with a medium shrink-swell potential, located primarily in the northern and western portions of the planning area (SLO County 2013).

Soil Erosion

Within the Carrizo Planning Area, 70,446 acres of soils are classified as having a high susceptibility to wind erosion (Wind Erodibility Groups 6–8). These soils are located primarily in the higher elevations of both the Temblor and Caliente ranges. In the middle elevations of the Temblor and Caliente ranges are 296,105 acres of soils classified as having a moderate susceptibility for wind erosion (Wind Erodibility Groups 4, 4L, and 5).

Primarily in the Carrizo Plain, the planning area has 30,672 acres of soils classified as having a high potential for erosion from water. There are 340,216 acres of soils classified as having a moderate potential for erosion from water; these are located primarily along the slopes of the Temblor and Caliente ranges (SLO County 2013).

Corrosive Soils

Within the Carrizo Planning Area, 30,672 acres of soil are identified as being highly corrosive to concrete. These are located primarily in the Carrizo Plain area in the vicinity of Soda Lake, as well as in the southwestern portion of the planning area. Primarily in the medium elevations of the Temblor and Caliente ranges are 153,032 acres of soils identified as being moderately corrosive to concrete.

The planning area has 54,052 acres of soils identified as being highly corrosive to steel. These are located primarily in the Carrizo Plain area in the vicinity of Soda Lake, as well as scattered about the Temblor and Caliente Ranges. There are 305,984 acres of soils identified as being moderately corrosive to steel, located throughout the Temblor and Caliente ranges (NRCS 2014; SLO County 2013).

Subsidence

There are no groundwater basins within the Carrizo Planning Area with a certified level of severity. Therefore, there is no risk of land subsidence within the planning area.

Faulting and Seismicity

Active Faults

The Carrizo Planning Area contains several active faults. The highly seismogenic San Andreas fault runs parallel to the base of the Temblor Range along the eastern portion of the planning area. The Caliente Range in the western portion of the planning area includes potentially active faults (SLO County 2013).

Landslides

Within the Carrizo Planning Area, 1,781 acres of soils are identified as having a very high potential for landsliding, located primarily in the higher elevations of the Temblor Range. Primarily in the moderate elevations of the Temblor and Caliente Ranges are 113,825 acres of soils identified as having a high potential for landsliding. In addition, 94,951 acres of soils are identified as having a moderate potential for landsliding (SLO County 2013).

Liquefaction

The planning area has 145,599 acres of land identified as having a moderate potential for liquefaction, primarily located in the Carrizo Plain (SLO County 2013).

Mineral Resources

The Carrizo Planning Area has no Energy and Extractive Resource Areas (EX) or Extractive Resource Areas (EX1).

NORTH COUNTY PLANNING AREA

Geology and Topography

The North County Planning Area includes most of the northern half of San Luis Obispo County. The Santa Lucia Range traverses the majority of the western portion of the planning area. The Temblor Range extends a bit into the eastern portion of the planning area. The Cholame Hills and Cholame Valley make up the planning area's northeastern portion. Other notable topographic features include Machesna Mountain, with an elevation of 4,066 feet, and the Shandon and San Juan valleys (DeCourten 2010).

The predominant geologic units in the North County Planning Area include the Paso Robles Formation, which underlies most of the central eastern portion of the planning area including the Cholame Valley and Hills. Undifferentiated alluvium underlies most of the narrow valleys in the North County Planning Area. The south central portion of this planning area is underlain with granitic rocks (SLO County 2013).

Soils

The predominant soil textures found in this planning area include fine loamy, coarse loamy, loamy upland, and clayey.

Expansive Soils

In the planning area, 65,925 acres of soils have a high shrink-swell potential, located primarily in the northeastern portion of the planning area. Primarily in the northern and western portions of the planning area, 494,844 acres of soil have a medium shrink-swell potential (SLO County 2013).

Soil Erosion

In the North County Planning Area, 387,193 acres of soils, located in the middle elevations of mountain ranges found throughout the planning area, are classified as having a high susceptibility to wind erosion (Wind Erodibility Groups 6–8). There are 306,523 acres of soils classified as having a moderate susceptibility for wind erosion (Wind Erodibility Groups 4, 4L, and 5); these are located primarily in the northern and western portions of the planning area.

The planning area has 668,748 acres of soils classified as having a moderate potential for erosion from water, located primarily along the slopes of the middle elevations of mountain ranges found throughout the planning area (SLO County 2013).

Corrosive Soils

In the North County Planning Area, 18,080 acres of soil, located primarily in the Santa Lucia Range, are identified as being highly corrosive to concrete. There are 185,730 acres of soils identified as being moderately corrosive to concrete; these are located primarily in the northeastern and central portions of the planning area.

Throughout the northern and western portions of the planning area are 404,671 acres of soils identified as being highly corrosive to steel. Located throughout eastern, central, and far western portions are 263,471 acres of soils identified as being moderately corrosive to steel (NRCS 2014; SLO County 2013).

Subsidence

The County Board of Supervisors has certified LOS III status for the Paso Robles Groundwater Basin. Due to the high levels of water table drawdown that have occurred in this basin, land subsidence is a possible risk for the 409,600 acres, or 640 square miles, of land overlying this groundwater subbasin. Studies done in the area reveal that a location 3 miles northeast of Paso Robles has shown a downward displacement from 0.6 to 2.1 inches (SLO County 2011).

Faulting and Seismicity

Active Faults

Approximately 15 miles of active fault lines traverse the western portion of the North County Planning Area. These fault lines run parallel to the Temblor Range (SLO County 2013).

Landslides

In the North County Planning Area, 14,417 acres of soils are identified as having a very high potential for landsliding, located primarily in the western portion. A high potential for landsliding has been identified for 437,640 acres of soils on lands located throughout the majority of the planning area, primarily in the west central and southern regions. In addition, 422,885 acres of soils have a moderate potential for landsliding (SLO County 2013).

Liquefaction

There are 9,286 acres of land identified as having a high potential for liquefaction and 100,144 acres of soils with a moderate potential. These lands are located primarily in the riverine valleys of the North County Planning Area (SLO County 2013).

Mineral Resources

Of the seven Energy and Extractive Resource Areas (EX) in San Luis Obispo County, four are located in the North County Planning Area. These include Huerhuero Creek in the central portion; Lime Mountain Mine and Klau Mine, both in the western portion; and the Standard Oil Company Tank Farm in the southern portion of the planning area.

Of the six Extractive Resource Areas (EX1) in the county, four are located in this planning area: La Panza Granitics, an area along the Navajo Creek, and two areas designated along the Salinas River (SLO County 2014a).

SAN LUIS OBISPO PLANNING AREA

Geology and Topography

The San Luis Obispo Planning Area is located in the central western portion of the county, inland from the Coastal Zone. The Santa Lucia Range abuts the northeastern border of the planning area. The Trish Hills traverse most of the southern portion of the planning area, with the Los Osos Valley running through the central region of the planning area (DeCourten 2010).

The predominant geologic units in the San Luis Obispo Planning Area include the Franciscan mélange, which underlies most of the northeastern portion. The Miguelito Member of the Pismo Formation underlies most of the southwestern portion of this planning area. Undifferentiated alluvium underlies much of the south central portion.

Soils

The predominant soil textures found in this planning area include shallow gravelly fine loamy, loamy claypan, and clayey (SLO County 2013).

Expansive Soils

The planning area has 18,409 acres of soils with a high shrink-swell potential and 44,082 acres of soils with a medium shrink-swell potential (SLO County 2013).

Soil Erosion

In the San Luis Obispo Planning Area, 69,074 acres of soils are classified as having a high susceptibility to wind erosion (Wind Erodibility Groups 6–8); these are located throughout the planning area, primarily in the higher elevations of the Santa Lucia Range and the Trish Hills. In the middle elevations of the Santa Lucia Range and the Trish Hills are 28,942 acres of soils classified as having a moderate susceptibility for wind erosion (Wind Erodibility Groups 4, 4L, and 5).

The planning area has 45,607 acres of soils classified as having a moderate potential for erosion from water, located throughout the planning area (SLO County 2013).

Corrosive Soils

Scattered throughout the planning area are 7,575 acres of soils identified as being moderately corrosive to concrete, while 20,422 acres of soils have been identified as being highly corrosive and 44,922 acres of soils identified as being moderately corrosive to steel.

Subsidence

The County Board of Supervisors has certified LOS III status for the Los Osos Groundwater Basin. Due to the high levels of water table drawdown that have occurred in this basin, land subsidence is a possible risk for the 6,990 acres of land overlying this groundwater basin.

Faulting and Seismicity

Active Faults

As previously discussed, the Los Osos Fault Zone, an Alquist-Priolo Fault Zone, traverses the San Luis Obispo Planning Area.

Landslides

In the San Luis Obispo Planning Area, 3,894 acres of soils are identified as having a very high potential for landsliding, located primarily in the northern and southern fringes of the planning area. There are 49,923 acres of soils identified as having a high potential for landsliding. These lands make up the bulk of the San Luis Obispo Planning Area and are located primarily in the central region. In addition, 14,498 acres of soils with a moderate potential for landsliding are located in the southern portion of the planning area (SLO County 2013).

Liquefaction

In this planning area, 627 acres of soils are identified as having a high potential for liquefaction and 12,475 acres of soils with moderate potential (SLO County 2013).

Mineral Resources

A portion of the Diablo Canyon Nuclear Power Plant is located in the Energy and Extractive Resource Area in the San Luis Obispo Planning Area. The planning area has no Extractive Resource Areas (EX1).

SOUTH COUNTY PLANNING AREA

Geology and Topography

The South County Planning Area generally consists of the land south and east of the city of San Luis Obispo to the Santa Barbara county line, between the Coastal Zone and the Carrizo Plain. The Caliente Range traverses most of the eastern half of this planning area. The topography toward the western part of the planning area includes Huasna Valley, Nipomo Valley and Mesa, Lopez Canyon, Newsom Ridge, and Temettate Ridge.

The predominant geologic units in the South County Planning Area include a sandstone and clay shale conglomerate, which underlies much of the north central portion. Undifferentiated alluvium underlies much of the southern and southwestern portions of the South County Planning Area. The Monterey Formation underlies the central western portions of the planning area, while the Atascadero Formation underlies the south central portion.

Soils

The predominant soil textures found in this planning area include sandy, shallow gravelly fine loamy, north slope gravelly fine loamy, and clayey (SLO County 2013).

Expansive Soils

The planning area has 24,547 acres of soils with a high shrink-swell potential, located primarily in the valley floors in the western portion of the planning area. There are 92,995 acres of soil with a medium shrink-swell potential, located primarily in the planning area's western portions (SLO County 2013).

Soil Erosion

In the South County Planning Area, 269,095 acres of soils classified as having a high susceptibility to wind erosion (Wind Erodibility Groups 6–8), located primarily on valley slopes in the western portion of the planning area. There are 95,414 acres of soils classified as having a moderate susceptibility for wind erosion (Wind Erodibility Groups 4, 4L, and 5), located in the middle elevations of the Caliente Range in the eastern portion and the middle elevations of valley slopes in the southwestern portion of the planning area.

In the higher elevations of the Caliente Range in the southeastern portion of the planning area are 7,528 acres of soils classified as having a high potential for erosion from water. Primarily in the middle elevations of the Caliente Range and along the valley slopes, 267,556 acres of soils in the planning area have been classified as having a moderate potential for erosion from water (SLO County 2013).

Corrosive Soils

In the South County Planning Area, 7,425 acres of soils are identified as being highly corrosive to concrete, located in the southeastern portion of the planning area in the Caliente Range. There are 87,718 acres of soils identified as being moderately corrosive to concrete, located primarily in the valley floor areas of the western portion.

There are 60,004 acres of soils identified as being highly corrosive to steel, located primarily in the valley floor areas of the western portion of the planning area, with 122,512 acres of soils identified as being moderately corrosive to steel located throughout (NRCS 2014; SLO County 2013).

Subsidence

There are no groundwater basins in the South County Planning Area with a Certified Level of Severity. Therefore, there is no risk of land subsidence within the planning area.

Faulting and Seismicity

Active Faults

The planning area has approximately 1.5 miles of active fault lines and 111 miles of potentially active fault lines. Both active and potentially active fault lines are located in the Caliente Range in the southeastern portion of the planning area (SLO County 2013).

Landslides

In this planning area, 10,236 acres of land are identified as having a very high potential for landsliding, located primarily in the higher elevations of the Caliente Range, which traverses the majority of the planning area. A high potential for landsliding has been identified for 289,508 acres of land, located primarily in the moderate elevations of the Caliente Range. In addition,

78,122 acres of land have been identified as having a moderate potential for landsliding (SLO County 2013).

Liquefaction

The planning area has 142,845 acres of land identified as having a high potential for liquefaction and 59,522 acres of land with a moderate potential (SLO County 2013).

Mineral Resources

Of the seven Energy and Extractive Resource Areas (EX) in San Luis Obispo County, one is located in the South County Planning Area: the Price Canyon-Ormande Road Oilfield in the planning area's western portion.

Of the six Extractive Resource Areas (EX1) in the county, two are located in the planning area; these include areas along Alamo Creek and the Santa Maria River.

3.6.2 REGULATORY SETTING

STATE

Alquist-Priolo Earthquake Fault Zoning Act

The Alquist-Priolo Earthquake Fault Zoning Act aims to mitigate the hazard of surface faulting to structures for human occupancy. Its main purpose is to prevent the construction of buildings used for human occupancy on the surface of active faults. The act only addresses the hazard of surface fault rupture and is not directed toward other earthquake hazards. The Seismic Hazards Mapping Act (discussed below) addresses non-surface fault rupture earthquake hazards, including liquefaction and seismically induced landslides.

The law requires the State Geologist to establish regulatory zones (known as Earthquake Fault Zones) around the surface traces of active faults and to issue appropriate maps. The maps are distributed to all affected cities, counties, and state agencies for their use in planning and controlling new or renewed construction. The law requires that before a project can be permitted, cities and counties must require a geologic investigation to demonstrate that proposed buildings will not be constructed across active faults. An evaluation and written report of a specific site must be prepared by a licensed geologist. If an active fault is found, a structure for human occupancy cannot be placed over the trace of the fault and must be set back from the fault, generally 50 feet (DOC 2009a).

Seismic Hazards Mapping Act

The Seismic Hazards Mapping Act of 1990 (Public Resources Code, Chapter 7.8, Sections 2690–2699.6), passed by the Legislature following the 1989 Loma Prieta earthquake, directs the Department of Conservation, California Geological Survey to identify and map areas prone to liquefaction, earthquake-induced landslides, and amplified ground shaking. The purpose of the act is to minimize loss of life and property through the identification, evaluation, and mitigation of seismic hazards.

Staff geologists at the California Geological Survey (CGS), in the Seismic Hazard Zonation Program, gather existing geological, geophysical, and geotechnical data from numerous sources to produce the Seismic Hazard Zone Maps. They integrate and interpret this data

regionally in order to evaluate the severity of the seismic hazards and designate as Zones of Required Investigation those areas prone to liquefaction and earthquake-induced landslides. Cities and counties are then required to use the Seismic Hazard Zone Maps in their land use planning and building permit processes. The Seismic Hazards Mapping Act requires that site-specific geotechnical investigations be conducted within the Zones of Required Investigation to identify and evaluate seismic hazards and formulate mitigation measures prior to permitting most developments designed for human occupancy (DOC 2009b).

California Building Code

California's building codes provide uniform requirements for buildings throughout the state. These requirements are contained in Title 24 of the California Code of Regulations (CCR). The CCR is divided into 28 separate titles based on subject matter or state agency authority. Title 24 is the twenty-fourth title within the CCR and is reserved for state regulations that govern the design and construction of buildings, associated facilities, and equipment. These regulations are also known as the state's "building standards." Title 24 applies to all building occupancies and related features and equipment throughout the state. It contains requirements for a building's structural, mechanical, electrical, and plumbing systems, in addition to measures for energy conservation, sustainable construction, maintenance, fire and life safety, and accessibility. A common misunderstanding is that Title 24 relates only to energy conservation. In fact, it covers a much wider range of requirements for buildings. Specific areas within Title 24 identify certain requirements for solar photovoltaic (PV) installations such as the California Electrical Code, the California Building Code, and the California Residential Code (which applies to residential buildings of one or two units).

Title 24, Part 2, is a portion of the California Building Code. The purpose of the CBC is to provide minimum standards to safeguard life or limb, health, property, and public welfare by regulating and controlling the design, construction, quality of materials, use and occupancy, location, and maintenance of all building and structures within its jurisdiction. The provisions of the CBC apply to the construction, alteration, movement, enlargement, replacement, repair, equipment, use and occupancy, location, maintenance, removal, and demolition of every building or structure or any appurtenances connected or attached to such buildings or structures throughout California (California Building Standards Commission 2014).

Published by the International Conference of Building Officials, the International Building Code is a widely adopted model building code in the United States. The CBC incorporates by reference the International Building Code with necessary California amendments. These amendments include significant building design criteria that have been tailored for California earthquake conditions. Design criteria for seismic loading and other geologic hazards are included in the design standards in the CBC. The CBC provides design criteria for geologically induced loading that govern sizing of structural members and provides calculation methods to assist in the design process.

LOCAL

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

The Conservation and Open Space Element (COSE) of the County's General Plan (adopted in 2010) contains policies intended to protect the county's mineral and soil resources.,COSE Goal MN 2 requires that significant mineral resources "be protected from land uses that threaten their availability for future mining," while other goals recognize the importance of balancing mineral resource extraction with other land uses and community goals. Goals specific to soil resources

describe the need to protect soil resources and the benefits achieved from soil conservation. COSE policies include surveys and monitoring of mineral and soil resources, and ensuring that access to important mineral and soil resources is preserved.

San Luis Obispo County General Plan – Agriculture Element

The General Plan Agriculture Element (revised in 2010) contains policies to protect soil resources of agricultural importance, observing that fertile soils are one of the "essential ingredients for...the unique, diverse, and valuable agricultural resources to be found in San Luis Obispo County" and declaring that "soil characteristics are critical for agriculture." Although many policies related to soil resources are included in the Conservation and Open Space Element, the Agriculture Element includes measures encouraging the county's landowners to adopt soil conservation and erosion reduction practices.

San Luis Obispo County General Plan – Land Use and Circulation Element

The Land Use and Circulation Element (LUCE) is a comprehensive land use document divided into four parts: Part I (Framework for Planning); Part II (The Area Plans); Part III (The Community/Village Plans); and Part IV(The Official Maps). Part I of the Land Use Element, Framework for Planning, contains policies and procedures that apply to the unincorporated area outside the coastal zone, defining how the LUE is used together with the Land Use Ordinance and other adopted plans. Parts II and III of the LUCE address planning areas and sub-areas in the overall county.

These area or community/village plans are adopted as part of the LUCE, while standards are adopted as part of the applicable Land Use Ordinance for that area (Title 22). Area and community/village plans in the LUCE include detailed descriptions of the County's planning areas, specific programs, and associated planning area 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 more detailed review when necessary for environmental issues such as sensitive habitats or geologic hazards. Part IV separates the planning area into land use categories, which define regulations for land uses, density and intensity of use.

Additionally, the LUCE provides policies for land use and transportation. The County's Strategic Growth Principles in the LUCE guide all countywide development, including Principle #3 to "foster distinctive, attractive communities with a strong sense of place." Policies and strategies in the LUCE apply countywide and by planning area. Policies and strategies seek to maintain distinct urban boundaries and protect attractive rural landscapes. The LUCE also uses combining designations to identify areas with characteristics that are either of public value or are hazardous to the public. The special location, terrain, man-made features, plants, or animals of these areas create a need for more careful project review to protect those characteristics or to protect public health, safety, and welfare. Combining designations are established to achieve the following (the following is not an all-inclusive list and only shows goals pertinent to geology and soils):

1) To reduce risks to life and property through proper location and design of structures within areas subject to man-made or natural hazards, such as airports; flooding; or geologic hazards, including active faulting, landsliding, or liquefaction.

2) To inform developers, owners, and prospective buyers of property about potential flood or geologic hazards, supporting reduction of future demands for publicly funded flood control, landslide stabilization, and emergency aid.

3) To enhance property values and increase economic benefits to the county by promoting the tourist trade and interest in the historic, scenic, and environmental amenities of the county.

4) To recognize the importance of continuing availability of mineral and energy resources by avoiding land use decisions which may inhibit the continuing viability of energy and extractive operations and result in unnecessary or premature termination of the use of such resources.

In the county, Geologic Study Areas (GSA) are applied to areas identified in the Alquist-Priolo Geologic Hazard Zones Act as "Special Study Zone" (Public Resources Code Section 2622); to areas within urban and village reserve lines subject to "moderately high to high" landslide risk or liquefaction potential (as identified by the Safety Element of the County of San Luis Obispo General Plan); and to lands outside urban reserve lines subject to high landslide risk potential (also according to the Safety Element). Further, one of the purposes of this element is to implement the sections of the California Public Resources Code (Chapter 7.5, Division 2, also known as the Alquist-Priolo Geologic Hazard Zones Act). As such, it is County policy that the Alquist-Priolo Geologic Hazard Zone Act, the policies and criteria established and adopted by the State Mining and Geology Board, and the Special Studies Zones maps of the State Geologist that affect the county are encompassed in the LUCE.

San Luis Obispo County Land Use Ordinance – Title 22

The Land Use Ordinance (LUO) contains standards for parcels containing important mineral or soil resources. These include ensuring that access to important mineral resources is preserved and that the loss of soil resources is kept to a minimum.

LUO – Energy and Extractive Resource Area (EX) and Extractive Resource Area (EX1) Combining Designation

The LUO delineates several combining designations that are applied throughout the county, including the Energy and Extractive Resource Area (EX) and Extractive Resource Area (EX1) combining designations. The EX Combining Designation, as described in Title 22, Section 22.14.040, is intended for areas with existing or proposed mineral extraction, petroleum exaction, or major public electric generation facilities, or for areas that the state designates as a mineral resource area of state or regional importance. The EX1 Combining Designation, as described in Title 22, Section 22.14.050, is intended for areas that the state designates as containing or highly likely to contain significant mineral deposits. Standards for both combining designations describe the permitting process for resource extraction and electric-generating facilities (electric-generating facilities are subject to the standards of Title 22, Section 22.32) and apply additional permitting and reporting requirements for all other uses.

LUO – Geologic Study Area (GSA)

The LUO includes the Geologic Study Area (GSA) Combining Designation, as described in Title 22, Section 22.14.070, which is applied to areas where geologic and soil conditions may pose a hazard to life and property. Areas under the GSA Combining Designation are subject to increased risk from seismic activity, landslides, and/or liquefaction. The combining designation

requires a geology and soils report for most land use permit applications and applies additional standards for grading and building siting.

LUO – Sensitive Resource Area (SRA)

The LUO includes the Sensitive Resource Area (SRA) Combining Designation, described in Title 22, Section 22.14.100, which applies to areas "with special environmental qualities, or areas containing unique or endangered vegetation or habitat resources." The standards in the SRA Combining Designation include requirements to prevent loss of soil resources through runoff, to minimize the clearing of topsoil, and to avoid disrupting prominent geological features. Additional standards in the SRA Combining Designation limit surface mining activities.

For an additional discussion of the SRA Combining Designation as it relates to other issues, see Section 3.4, Biological Resources, of this EIR.

LUO – Grading Permit Requirements

Title 22, Section 22.52.050 establishes the requirement for grading permits in the county. Unless exempt under Title 22, Sections 22.52.070 and 22.52.080, grading permits are required for (1) projects moving more than 50 cubic yards of earthwork, (2) activities within a watercourse that involves the movement of more than 20 cubic yards of earthwork, or (3) removal of more than 1 acre of vegetation. Projects that are otherwise exempt from grading permit requirements may also be required to comply with some sections of the Grading and Drainage chapter of the LUO (Title 22, Chapter 22.52).

An additional discussion of grading permit standards is located in Section 3.11, Water Resources, of this EIR.

LUO – Planning and Community Area Standards

Within the LUO, Article 9 of Title 22 and other community planning documents require that some types of land use applications or activities in designated areas meet standards to protect geologic and soil resources and to minimize the reduce the risk posed by geologic hazards , in addition to the general countywide standards discussed above. These standards may include more extensive permitting requirements, geologic and soil surveys, or other protective measures.

LUO – Development Standards and General Requirements

Section 22.32.030.D requires that areas cleared of vegetation and topsoil during construction be restored (regraded, covered with topsoil, and replanted) once those disturbed areas are no longer required for operation.

Summary of Local Regulations and Policies

Table 3.6-1 summarizes regulations and policies from the documents described above, including requirements to minimize loss of soil, preserve access to mineral resources, and reduce the threat posed by geological hazards in high-risk areas. Information is organized by planning area. The table also identifies where policies or standards only apply to subareas or land use designations.

A number of standards that indirectly relate to geology and soils, including additional standards for grading, erosion, and runoff, are located other sections of this EIR, including Water Resources, Biological Resources, Hazards and Hazardous Materials, and Agricultural Resources.

TABLE 3.6-1
LOCAL POLICIES AND REGULATIONS FOR GEOLOGY AND SOILS

Applicable Code Section	Summary
Countywide	
Title 22, Section 22.14.040.B.1.c	Proposed uses in the EX Combining Designation not directly related to energy or extraction operations require a Minor Use Permit or Conditional Use Permit.
Title 22, Section 22.14.040.B.2.c	Permit applications in the EX Combining Designation for uses other than resource extraction or electricity generation must include an mineral resource report.
Title 22, Section 22.14.040.B.3	Permit applications in the EX Combining Designation for uses other than resource extraction or electricity generation may not adversely affect the continued operation or expansion of energy or extraction uses.
Title 22, Section 22.14.050.B.2	Permit applications in the EX1 Combining Designation for uses other than resource extraction may not adversely affect the continued operation or expansion of extraction uses.
Title 22, Section 22.14.070.B	Land use permit applications in the GSA Combining Designation must submit a geologic and soils report, with the exception of some residential and agricultural activities, and small-scale remodels and additions.
Title 22, Section 22.14.070.E	With some exceptions, all grading in the GSA Combining Designation must be engineered grading and no structure intended for human occupancy may be located within 50 feet of an active fault trace in an Earthquake Fault Zone.
Title 22, Section 22.14.100.C.5	Projects subject to the standards of the SRA Combining Designation must minimize topsoil clearing and must prevent the loss of soil resources through runoff.
Title 22, Section 22.14.100.D.1	No surface mining is permitted in the SRA Combining Designation, except in areas also designated as the EX Combining Designation (see Title 22, Section 22.14.050).
Title 22, Section 22.14.100.D.4	Projects subject to the standards of the SRA Combining Designation must preserve prominent geological features.
Conservation and Open Space Element, Implementation Strategy MN 2.4.1	Projects in the EX and EX1 combining designations, other than mineral extraction projects, must prepare a mineral resource report and show that they will not adversely affect the operation or expansion of an existing extraction use.
Conservation and Open Space Element, Implementation Strategy SL 1.2.1	Discretionary projects near blueline streams, or in areas of moderate or greater erosion potential, must maintain natural vegetation and topography to the greatest extent feasible.
Conservation and Open Space Element, Implementation Strategy SL 1.2.2	Discretionary projects must restore degraded and eroded areas with native vegetation and other soil conservation techniques to the extent feasible.
Conservation and Open Space Element, Policy MN 2.1	Protect significant mineral and aggregate resources from incompatibles uses, so that the resources may be available for future use.
Conservation and Open Space Element, Policy MN 2.2	Protect existing mineral resource extraction activities from incompatible uses, land use category changes, and land divisions that could affect extraction.

Applicable Code Section	Summary
Conservation and Open Space Element, Policy MN 2.4	Projects requiring a discretionary land use permit may not adversely affect the operation or expansion of an existing extraction use.
Conservation and Open Space Element, Policy SL 1.2	Development or any soil-disturbing activities on steep slopes and ridgelines must implement erosion and sediment control practices.
Conservation and Open Space Element, Policy SL 1.3	Minimize erosion from new development by avoiding steep slopes and limiting site disturbance.
Conservation and Open Space Element, Policy SL 3.1	Conserve soils designated as Important Agricultural Soils.
Carrizo Planning Area	
No additional policies or code specific to the Carrizo Planning Area.	
North County Planning Area	
Title 22, Section 22.94.070.D.2	New roads in the Nacimiento Sub-Area, as part of a project involving new land divisions or requiring a Conditional Use Permit, shall be constructed to minimize erosion.
Title 22, Section 22.94.080.E-F	New development in the Salinas River Sub-Area shall be sited to minimize the loss of prime soils or other soils of agricultural value.
Title 22, Section22.94.074.D.2.b	For certain new land divisions in the Residential Rural land use designation of the Nacimiento Sub-Area, buildings shall be located on soils best suited for septic systems.
San Luis Obispo Planning Area	
Title 22, Section 22.96.040.D	New development in the San Luis Obispo Sub-Area shall be sited to minimize the loss of prime soils and other soils classified as highly productive.
South County Planning Area	
Title 22, Section 22.98.020.E.1.f	All grading activities or site disturbances below the rim of Black Lake Canyon outside of the designated Sensitive Resource Area shall require a grading permit; the permit application shall include a comprehensive erosion and sedimentation control program.
Title 22, Section 22.98.070.B.2-3	All projects on the edge of Nipomo Mesa in the South County Sub-Area shall avoid grading on slopes steeper than 15% and shall address erosion concerns in all Minor Use Permit, Conditional Use Permit, and land division applications. Septic systems within 150 feet of steep bluff slopes shall meet additional design standards.

3.6.3 IMPACTS AND MITIGATION MEASURES

THRESHOLDS OF SIGNIFICANCE

The proposed Program would result in potentially significant impacts if development would result in substantial adverse physical impacts associated with any of the following conditions:

1) Expose people or structures to potential substantial adverse effects, including the risk of loss, injury, or death involving rupture of a known earthquake fault (as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map), strong seismic ground shaking, seismic-related ground failure, including liquefaction, or landslides or 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.

2) Result in substantial soil erosion or the loss of topsoil.

3) Be located on expansive soil, creating substantial risks to life or property.

4) Be inconsistent with the goals and policies of the County's Safety Element relating to geologic and seismic hazards.

5) Preclude the future extraction of valuable mineral resources.

PROJECT IMPACTS AND MITIGATION MEASURES

Expose People or Structures to Potential Substantial Adverse Effects, Including the Risk of Loss, Injury, or Death Involving Rupture of a Known Earthquake Fault (as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map), Strong Seismic Ground Shaking, Seismic-Related Ground Failure, Including Liquefaction, or Landslides or 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 (Threshold 1)

Impact 3-6-1 – Solar Implementation of the proposed Program could result in the exposure of people, structures, and infrastructure to seismic hazards. This impact is considered **less than significant (Class III)**.

Central California, including San Luis Obispo County, is subject to the effects of seismic activity due to the active faults that traverse the county. As discussed in the Existing Setting subsection above, two Alquist-Priolo Special Earthquake Study Zone Faults traverse the county—the San Andreas and the Los Osos fault zones. Because these two fault zones are Alquist-Priolo faults, there is a potential for surface ground rupture during a seismic event along these segments.

Development of solar electric facility (SEF) projects could result in structures being placed and maintained within an Earthquake Fault Zone. However, these structures would not be designed for human occupancy and would not place people at risk of surface rupture or other seismic hazards. In the event that solar panels and associated infrastructure are placed within an Earthquake Fault Zone, GSA performance standards would apply and a geology and soils report would be required. Structures would be designed, engineered, and installed to avoid or withstand surface rupture or other seismic hazards. Additionally, it should be noted that the RESP would not negate or supersede the requirements of the Alquist-Priolo Earthquake Fault Zoning Act.

Development of SEFs in the county, whether roof- or ground-mounted, would be designed in accordance with CBC requirements that address structural seismic safety. All new development would be required to comply with the CBC, which includes design criteria for seismic loading and other geologic hazards, including design criteria for geologically induced loading that govern sizing of structural members and provide calculation methods to assist in the design process and mounting and installation requirements for rooftop solar panels specific to roof types. Thus, while shaking impacts would be potentially damaging, they would also tend to be reduced in their structural effects due to CBC criteria that recognize this potential. The CBC includes provisions for

buildings to structurally survive an earthquake without collapsing and includes measures such as anchoring to the foundation and structural frame design.

Conformance with GSA performance standards, including engineered grading plan requirements where applicable, would reduce impacts related to unstable earth conditions to **less than significant (Class III)**.

Impact 3-6-1 – Wind Implementation of the proposed Program could result in the exposure of people, structures, and infrastructure to seismic hazards. This is a **less than significant (Class III)** impact.

Construction and operation of wind energy conversion system (WECS) projects would not place structures within an Alquist-Priolo Earthquake Fault Zone, would not produce unstable earth conditions, and would not expose people or structures to unstable earth conditions. Only Tier 1 WECS, which would be mounted on a rooftop or existing structure, would be streamlined under this Program. No soil disturbance or excavation would occur, and the WECS would be mounted on structures that were sited and constructed in conformance with the California Building Code.

In the event that WECs projects and associated infrastructure are proposed within an Earthquake Fault Zone, GSA performance standards would apply and a geology and soils report would be required. Structures would be designed, engineered, and installed to avoid or withstand surface rupture or other seismic hazards. Additionally, it should be noted that the proposed Program would not negate or supersede the requirements of the Alquist-Priolo Earthquake Fault Zoning Act.

Development of WECs in the county, whether roof- or ground-mounted, would be designed in accordance with CBC requirements that address structural seismic safety. All new development would be required to comply with the CBC, which includes design criteria for seismic loading and other geologic hazards. As such, the impact would be **less than significant (Class III).**

Impact 3-6-1 – Policy Changes Implementation of the proposed Program could result in the exposure of people, structures, and infrastructure to seismic hazards. This impact is considered **less than significant (Class III)**.

The proposed RE Combining Designation overlaps large portions of the GSA Combining Designation in the county. The GSA Combining Designation indicates areas subject to increased risk from seismic activity, landslides, and/or liquefaction. However, for areas where the proposed RE Combining Designation overlaps with a GSA, all performance standards for that GSA would continue to apply under the proposed Program. Specifically, streamlined Tier 2 and Tier 3 SEF projects would be subject to engineered grading plan requirements to reduce risks to structures, life, and property from unstable/hazardous earth conditions.

The Program would not negate or supersede the requirements of the Alquist-Priolo Earthquake Fault Zoning Act. No structures designed for human occupancy would be placed within a California Geological Survey Earthquake Fault Zone. For areas where the RE Combining Designation overlaps with a GSA, all performance standards for that GSA would continue to apply under the proposed Program. The proposed Program would not result in any policy changes that would increase the likelihood of a structure being placed within an Earthquake Fault Zone, nor would the proposed Program change any of the existing requirements for an unoccupied structure that is placed within an Earthquake Fault Zone.

Similarly, requirements of the California Building Code would continue to apply to all projects proposed under the Program throughout the county. Additionally, the Program does not pertain to the development of structures designed for human occupancy. Therefore, impacts related to unstable earth conditions would be **less than significant (Class III)**.

Result in Substantial Soil Erosion or the Loss of Topsoil (Threshold 2)

Impact 3-6-2 – Solar

Implementation of the proposed Program could result in increased soil erosion or reduce the stability of soils within the project area. This impact is considered **less than significant (Class III)**.

Construction activities for SEFs could include soil disturbance, grading, site leveling, filling of depressions and downslope areas, and excavation of foundations for solar panel support structures, gen-tie lines, telecommunication equipment and structures, switchgear buildings or structures, and security fencing. These construction activities could lead to topographic changes within the project area. These topographic modifications, if improperly designed, could lead to soil erosion, loss of topsoil, and/or unstable soil conditions.

However, all SEFs disturbing more than 50 cubic yards of material or removing more than 1 acre of vegetation would be subject to the County's grading permit requirements (Chapter 22.52 of the County Code), which establish standards to minimize erosion and sedimentation, reduce the harmful effects of stormwater runoff, and otherwise protect the natural environment. Grading permit requirements include submittal of a grading plan and erosion and sedimentation control plan (Section 22.52.120), including protective measures to be taken during construction, such as hydro-mulching, berms (temporary or permanent), interceptor ditches, subsurface drains, terraces, and sediment traps in order to prevent erosion of the cut faces of excavations or of the sloping surfaces of fills. If necessary, a civil engineering report, soil engineering report, and/or engineering geology report could also be required.

In addition, COSE Policies SL 1.2 and SL 1.3 recommend that erosion and sediment control practices are implemented on steep slopes, natural vegetation and topography are retained to the maximum extent feasible in areas designated with at least moderate erosion potential, degraded and eroded areas are restored where feasible by replanting with native vegetation, grading and site disturbance is avoided on slopes over 30 percent, and projects are designed to minimize runoff. Additionally, the retention of natural drainage systems is encouraged. Further, under the proposed Program, sites graded and cleared of natural vegetation and topsoil during construction are required to be restored (regraded, covered with topsoil, and replanted) once those disturbed areas are no longer required for operation (LUO Section 22.32.040.A.3). Soil removed during construction must be stored for later use.

Adherence to the County Land Use Ordinance, COSE Policies SL 1.2 and SL 1.3, and proposed LUO Section 22.32.040.A.3 would reduce impacts to **less than significant (Class III)**.

Impact 3-6-2 – Wind

Implementation of the proposed Program could result in increased soil erosion or reduce the stability of soils within the project area. This impact is considered **less than significant (Class III)**.

Construction and operation of WECS would not increase soil erosion or lead to unstable soils. Only Tier 1 WECS, which would be mounted on a rooftop or existing structure, would be

streamlined under this program. No grading, excavation, or filling would occur.. Impacts would be **less than significant (Class III)**.

Impact 3-6-2 – Policy Changes Implementation of the proposed Program could result in changes to countywide policies that could indirectly result in increased soil erosion or reduce the stability of soils within the project area. This impact is considered **less than significant (Class III)**.

For areas where the RE Combining Designation overlaps with a GSA, all performance standards for the Geologic Study Area would continue to apply under the proposed Program. Similarly, requirements of the California Building Code would continue to apply to all projects streamlined under the proposed Program. Additionally, the proposed Program does not negate or conflict with any County General Plan COSE soil conservation requirements to preserve and protect soil resources from degradation or loss by wind and water erosion (SLO County 2010b). COSE Policy SL 1.2 requires erosion and sedimentation control practices during development or other soil-disturbing activities on steep slopes and ridgelines, while Policy SL 1.3 requires that grading and site disturbance on slopes greater than 30 percent be avoided. Therefore, compliance with General Plan COSE policies and adherence to CBC requirements and the requirements in the Land Use Ordinance for GSA would reduce effects associated with the implementation of the proposed Program and would not result in increased soil erosion or unstable soils. The impact would be **less than significant (Class III).**

Be Located on Expansive Soil, Creating Substantial Risks to Life or Property (Threshold 3)

Impact 3-6-3 – Solar Implementation of the proposed Program could result in structures being sited on expansive soils. This impact is considered **less than significant (Class III)**.

Expansive soils are typically fine grained with a high percentage of clay that is subject to expanding and contracting as soil moisture content fluctuates. Based on the degree of expansion and contraction, damage may occur to building foundations, concrete flatwork, and asphalt or concrete pavements. The county has 134,221 acres of soil with a high shrink-swell potential, located primarily in the lower elevations of the coastal regions of the county. The North County Planning Area has the highest number of acres with high shrink-swell potential, with approximately 66,000 acres of these soils. The South County Planning Area contains approximately 26,000 acres of soils with high shrink-swell potential, followed by the San Luis Obispo Planning Area with approximately 18,000 acres. The Carrizo Planning Area has the lowest number of acres with expansive soils with a high shrink-swell potential, approximately 14,000 acres.

Construction and operation of ground-mounted SEFs could result in structures being placed and maintained on expansive soils. These structures would not be designed for human occupancy and would not place people at risk of geologic hazards. Under the RESP, requirements of the California Building Code would continue to apply to all streamlined projects, and structures located on expansive soils would be designed and engineered to withstand the shrink-swell forces of expansive soils (SLO County 2013). Although Tier 3 SEFs would include a greater number of structures than Tier 1 and Tier 2 SEFs, the risk of exposure to geologic hazards would be the similar and would remain less than significant.. Conformance with California Building Code requirements, which would apply to all streamlined SEFs, would reduce the risk of exposure to geologic hazards (including expansive soils) to **less than significant (Class III)**.

Impact 3-6-3 – Wind Implementation of the proposed Program could result in structures being sited on expansive soils. This impact is considered **less than significant (Class III)**.

Construction and operation of WECS would not place structures on expansive soils. Only Tier 1 WECS, which would be mounted on a rooftop or existing structure, would be streamlined under this program. Therefore, WECS would not be placed on expansive soils, and no impacts under this threshold would occur as a result of streamlined WECS. This impact is **less than significant (Class III)**.

Impact 3-6-3 – Policy Changes Implementation of the proposed Program could result in changes to countywide policies that could indirectly result in placement of structures on expansive soils. This impact is considered **less than significant (Class III)**.

The Program would not negate or supersede the requirements of the California Building Code. No structures designed for human occupancy would be constructed under the proposed Program. The proposed Program would not result in any policy changes that would increase the likelihood of a structure being placed on expansive soils, nor would the proposed Program change any of the existing requirements for an unoccupied structure that is placed on expansive soils. Therefore, this impact is **less than significant (Class III)**.

Be Inconsistent with the Goals and Policies of the County's Safety Element Relating to Geologic and Seismic Hazards (Threshold 4)

The County's Safety Element contains goals and policies to avoid loss of life or damage to structures resulting from fault rupture hazards, ground shaking hazards, liquefaction and seismic settlement, and slope instability and landslides. The intensity and location of these hazards is discussed above under Threshold 1. Also, as discussed above, GSA performance standards and the requirements of the Alquist-Priolo Earthquake Fault Zoning Act and the California Building Code would minimize exposure to geologic and seismic hazards.

Impact 3-6-4 – Solar Implementation of the proposed Program could result in actions or projects that are inconsistent with the County's Safety Element relating to geologic and seismic hazards. This impact is considered **less than significant (Class III)**.

As discussed above under Threshold 1, construction and operation of SEFs would not produce unstable earth conditions. Conformance with GSA performances, which would apply to all streamlined SEFs within a Geologic Study Area, would reduce the risk of exposure to unstable earth conditions to less than significant. In the event solar panels and associated infrastructure are placed within an Earthquake Fault Zone, GSA performance standards would apply and engineered grading would be required. Structures would be designed, engineered, and installed to avoid or withstand surface rupture or other seismic hazards. Although Tier 3 SEFs would include a greater number of structures than Tier 1 and Tier 2 SEFs, the risk of exposure to unstable earth conditions or surface rupture and other seismic hazards would be the similar and would remain **less than significant (Class III)**.

Impact 3-6-4 – Wind Implementation of the proposed Program could result in actions or projects that are inconsistent with the County's Safety Element relating to geologic and seismic hazards. This impact is considered **less than significant (Class III)**.

Construction and operation of WECS would not produce unstable earth conditions and would not expose people or structures to unstable earth conditions. Construction and operation of WECS would not place structures built for human occupancy within an Earthquake Fault Zone. Only Tier 1 WECS, which would be mounted on a rooftop or existing structure, would be streamlined under this program. No soil disturbance or excavation would occur, and the WECS would be mounted on structures that were sited and constructed in conformance with the California Building Code. Exposure to unstable earth conditions or surface rupture would not occur within any of the planning areas, and this impact is considered **less than significant (Class III)**.

Impact 3-6-4 – Policy Changes Changes to countywide policies resulting from implementation of the proposed Program could result in actions or projects that are inconsistent with the County's Safety Element relating to geologic and seismic hazards. This impact is considered **less than significant (Class III)**.

For areas where the RE Combining Designation overlaps with a GSA, all performance standards for that Geologic Study Area would continue to apply under the proposed Program. Similarly, requirements of the Alquist-Priolo Fault Zoning Act and the California Building Code would continue to apply to all projects streamlined under the proposed Program. Additionally, the proposed Program does not pertain to the development of structures designed for human occupancy. Therefore, implementation of the proposed Program would not result in actions or projects that are inconsistent with the County's Safety Element relating to geologic and seismic hazards. This impact is considered **less than significant (Class III)**.

Preclude the Future Extraction of Valuable Mineral Resources (Threshold 5)

Construction and operation of either solar or wind energy projects would not interfere with mineral resource extraction. The highest concentration of valuable mineral resources is found in the North County Planning Area and the San Luis Obispo Planning Area. For areas where the RE Combining Designation overlaps with an Energy and Extractive Resource Area (EX) or an Extractive Resource Area (EX1) combining designation, all standards for the EX and EX1 areas would continue to apply under the proposed Program. These standards include, but are not limited to, the requirement that land uses other than resource extraction may not adversely affect the continued operation or expansion of extraction uses.

In addition, Implementation Strategy MN 2.4.1 under General Plan COSE Policy MN 2.4 requires that projects in the EX and EX1 combining designations, other than mineral extraction projects, prepare a mineral resource report and show that they will not adversely affect the operation or expansion of an existing extraction use and that significant mineral and aggregate resources are protected from incompatibles uses, so that the resources may be available for future use.

Impact 3-6-5 – Solar Implementation of the proposed Program could result in the preclusion of the future extraction of valuable mineral resources. This impact is considered **less than significant (Class III)**.

Although SEFs could occupy up to 160 acres, they would be subject to the LUO requirements of the EX and EX1 combining designations. These requirements would ensure that SEFs are not sited in locations that are reserved or zoned for present or future mineral resource extraction. Therefore, SEFs would not preclude the future extraction of valuable mineral resources. **Less than significant (Class III)** impacts would occur under this threshold as a result of streamlined SEFs.

Impact 3-6-5 – Wind Implementation of the proposed Program could result in preclusion of the future extraction of valuable mineral resources. This impact is considered **less than significant (Class III)**.

Construction and operation of WECS would not place structures on mineral resource extraction lands. Only Tier 1 WECS, which would be mounted on a rooftop or existing structure, would be streamlined under this program. Therefore, WECS would not preclude the future extraction of valuable mineral resources. **Less than significant (Class III)** impacts under this threshold would occur as a result of streamlined WECS.

Impact 3-6-5 – Policy Changes Changes to countywide policies resulting from implementation of the proposed Program could result in preclusion of the future extraction of valuable mineral resources. This impact is considered **less than significant (Class III)**.

The RESP would not negate or supersede the performance standards of the EX or EX1 combining designations. No structures would be sited on lands reserved or zoned for mineral resource extraction under the proposed Program. The proposed Program would not result in any policy changes that would preclude the future extraction of valuable mineral resources. Therefore this impact is **less than significant (Class III).**

CUMULATIVE IMPACTS

Exposure of people or structures to geologic and seismic hazards, and adverse impacts to soil and mineral resources, are issues that need consideration for any construction project. Countywide conditions, programs, and projections, when considered together with the proposed Program, would not result in a cumulative impact due to continued compliance with the requirements of existing laws and regulations, such as the Alquist-Priolo Fault Zoning Act, the California Building Code, and the General Plan policies discussed in Thresholds 1 through 5.

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3.7 Greenhouse Gases and Climate Change

This section provides a discussion of the effect of the proposed Renewable Energy Streamlining Program (RESP or Program) on greenhouse gas (GHG) emissions and the associated effects of climate change. The California Environmental Quality Act (CEQA) requires that lead agencies consider the reasonably foreseeable adverse environmental effects of projects they are considering for approval.

3.7.1 PHYSICAL SETTING

Greenhouse gas (GHG) emissions are said to result in an increase in the earth's average surface temperature. This is commonly referred to as global warming. The rise in global temperature is associated with long-term changes in precipitation, temperature, wind patterns, and other elements of the earth's climate system. This is also known as climate change. These changes are now thought to be broadly attributed to GHG emissions, particularly those emissions that result from the human production and use of fossil fuels. Therefore, all activities associated with the proposed Program are evaluated toward this global contribution.

CLIMATE

Since the early 1990s, scientific consensus holds that the world's population is releasing GHGs faster than the earth's natural systems can absorb them. These gases are released as byproducts of fossil fuel combustion, waste disposal, energy use, land use changes, and other human activities. This release of gases, such as carbon dioxide (CO_2), methane (CH_4), and nitrous oxide (N_2O), creates a blanket around the earth that allows light to pass through but traps heat at the surface, preventing its escape into space. While this is a naturally occurring process known as "the greenhouse effect," human activities have accelerated the generation of GHGs beyond natural levels. The overabundance of GHGs in the atmosphere has led to a warming of the earth and has the potential to severely impact the earth's climate system.

While often used interchangeably, there is a difference between the terms "climate change" and "global warming." According to the National Academy of Sciences, climate change refers to any significant, measurable change of climate lasting for an extended period of time that can be caused by both natural factors and human activities. Global warming, on the other hand, is an average increase in the temperature of the atmosphere caused by increased GHG emissions. The use of the term *climate change* is becoming more prevalent because it encompasses all changes to the climate, not just temperature.

To fully understand global climate change, it is important to recognize the naturally occurring greenhouse effect and to define the GHGs that contribute to this phenomenon. Various gases in the earth's atmosphere, classified as atmospheric GHGs, play a critical role in determining the earth's surface temperature. Solar radiation enters the earth's atmosphere from space and a portion of the radiation is absorbed by the earth's surface. The earth emits this radiation back toward space, but the properties of the radiation change from high-frequency solar radiation to lower-frequency infrared radiation. Greenhouse gases, which are transparent to solar radiation, are effective in absorbing infrared radiation. As a result, this radiation that otherwise would have escaped back into space is now retained, resulting in a warming of the atmosphere. This phenomenon is known as the greenhouse effect. Among the prominent GHGs contributing to the greenhouse effect are CO_2, CH_4, N_2O, hydrofluorocarbons (HFCs), perfluorocarbons (PFCs), and sulfur hexafluoride (SF_6).

Table 3.7-1 provides descriptions of the primary GHGs attributed to global climate change, including a description of their physical properties, primary sources, and contribution to the greenhouse effect.

TABLE 3.7-1
GREENHOUSE GASES

Greenhouse Gas	Description
Carbon Dioxide (CO_2)	Carbon dioxide is a colorless, odorless gas. CO_2 is emitted in a number of ways, both naturally and through human activities. The largest source of CO_2 emissions globally is the combustion of fossil fuels such as coal, oil, and gas in power plants, automobiles, industrial facilities, and other sources. A number of specialized industrial production processes and product uses such as mineral production, metal production, and the use of petroleum-based products can also lead to CO_2 emissions. The atmospheric lifetime of CO_2 is variable because it is so readily exchanged in the atmosphere.[1]
Methane (CH_4)	Methane is a colorless, odorless gas that is not flammable under most circumstances. Methane is the major component of natural gas, about 87 percent by volume. It is also formed and released to the atmosphere by biological processes occurring in anaerobic environments. Methane is emitted from a variety of both human-related and natural sources. Human-related sources include fossil fuel production, animal husbandry (intestinal fermentation in livestock and manure management), rice cultivation, biomass burning, and waste management. These activities release significant quantities of CH_4 to the atmosphere. Natural sources of CH_4 include wetlands, gas hydrates, permafrost, termites, oceans, freshwater bodies, non-wetland soils, and other sources such as wildfires. The atmospheric lifetime of CH_4 is about12 years.[2]
Nitrous Oxide (N_2O)	Nitrous oxide is a clear, colorless gas with a slightly sweet odor. Nitrous oxide is produced by both natural and human-related sources. Primary human-related sources of N_2O are agricultural soil management, animal manure management, sewage treatment, mobile and stationary combustion of fossil fuels, adipic acid production, and nitric acid production. Nitrous oxide is also produced naturally from a wide variety of biological sources in soil and water, particularly microbial action in wet tropical forests. The atmospheric lifetime of N_2O is approximately 120 years.[3]
Hydrofluorocarbons (HFCs)	Hydrofluorocarbons are man-made chemicals, many of which have been developed as alternatives to ozone-depleting substances for industrial, commercial, and consumer products. The only significant emissions of HFCs before 1990 were of the chemical HFC-23, which is generated as a byproduct of the production of HCFC-22 (or Freon 22, used in air conditioning applications). The atmospheric lifetime for HFCs varies from just over a year for HFC-152a to 260 years for HFC-23. Most of the commercially used HFCs have atmospheric lifetimes less than 15 years (e.g., HFC-134a, which is used in automobile air conditioning and refrigeration, has an atmospheric life of 14 years).[4]
Perfluorocarbons (PFCs)	There are seven PFC gases: perfluoromethane (CF_4), perfluoroethane (C_2F_6), perfluoropropane (C_3F_8), perfluorobutane (C_4F_{10}), perfluorocyclobutane (C_4F_8), perfluoropentane (C_5F_{12}), and perfluorohexane (C_6F1_4). Natural geological emissions have been responsible for the PFCs that have accumulated in the atmosphere in the past; however, the largest current source is aluminum production, which releases CF_4 and C_2F_6 as byproducts. The estimated atmospheric lifetimes for CF_4 and C_2F_6 are 50,000 and 10,000 years, respectively.[4,5]
Sulfur Hexafluoride (SF_6)	Sulfur hexafluoride is an inorganic compound that is colorless, odorless, nontoxic, and generally nonflammable. Sulfur hexafluoride is primarily used as an electrical insulator in high voltage equipment. The electric power industry uses roughly 80 percent of all SF_6 produced worldwide. Significant leaks occur from aging equipment and during equipment maintenance and servicing. Sulfur hexafluoride has an atmospheric life of 3,200 years.[4]

Sources: [1] EPA 2011a, [2] EPA 2011b, [3] EPA 2010a, [4] EPA 2010b, [5] EFCTC 2003

Each GHG differs in its ability to absorb heat in the atmosphere based on the lifetime, or persistence, of the gas molecule in the atmosphere. Gases with high global warming potential, such as HFCs, PFCs, and SF_6, are the most heat-absorbent. Methane traps over 21 times more

heat per molecule than CO_2, and N_2O absorbs 310 times more heat per molecule than CO_2. Often, estimates of GHG emissions are presented in carbon dioxide equivalents (CO_2e), which weighs each gas by its global warming potential (GWP). Expressing GHG emissions in CO_2e takes the contribution of all GHG emissions to the greenhouse effect and converts them to a single unit equivalent to the effect that would occur if only CO_2 were being emitted. **Table 3.7-2** shows the GWPs for different GHGs for a 100-year time horizon.

TABLE 3.7-2
GLOBAL WARMING POTENTIAL FOR GREENHOUSE GASES

Greenhouse Gas	Global Warming Potential
Carbon Dioxide (CO_2)	1
Methane (CH_4)	21
Nitrous Oxide (N_2O)	310
Hydrofluorocarbons (HFCs), Perfluorocarbons (PFCs)	6,500
Sulfur Hexafluoride (SF_6)	23,900

Source: California Climate Action Registry 2009

As the name implies, global climate change is a global problem. Greenhouse gases are global pollutants, unlike criteria air pollutants and toxic air contaminants, which are pollutants of regional and local concern, respectively. California is a significant emitter of CO_2 in the world and produced 452 million gross metric tons of CO_2e in 2010 (CARB 2013). In 2006, approximately 917,700 metric tons of CO_2e emissions were generated in the unincorporated county (SLO County 2011). Consumption of fossil fuels in the transportation sector was the single largest source of California's GHG emissions in 2010, accounting for 38.3 percent of total GHG emissions in the state (CARB 2013). This category was followed by the electric power sector (including both in-state and out-of-state sources) (20.7 percent) and the industrial sector (19.0 percent) (CARB 2013).

EFFECTS OF GLOBAL CLIMATE CHANGE

California can draw on substantial scientific research conducted by experts at various universities and research institutions. With more than a decade of concerted research, scientists have established that the early signs of climate change are already evident in the state—as shown, for example, in increased average temperatures, changes in temperature extremes, reduced snowpack in the Sierra Nevada, sea level rise, and ecological shifts.

Many of these changes are accelerating locally, across the country, and around the globe. As a result of emissions already released into the atmosphere, California will face intensifying climate change in coming decades (CNRA 2009). Generally, research indicates that California should expect overall hotter and drier conditions, with a continued reduction in winter snow (with concurrent increases in winter rains), as well as increased average temperatures and accelerating sea-level rise. In addition to changes in average temperatures, sea level, and precipitation patterns, the intensity of extreme weather events is also changing (CNRA 2009).

Climate change temperature projections identified in the 2009 California Climate Adaptation Strategy suggest the following (CNRA 2009):

- Average temperature increase is expected to be more pronounced in the summer than in the winter season.

- Inland areas are likely to experience more pronounced warming than coastal regions.
- Heat waves are expected to increase in frequency, with individual heat waves also showing a tendency toward becoming longer and extending over a larger area, thus more likely to encompass multiple population centers in California at the same time.
- As GHGs remain in the atmosphere for decades, temperature changes over the next 30 to 40 years are already largely determined by past emissions. By 2050, temperatures are projected to increase by an additional 1.8 to 5.4°F (an increase one to three times as large as that which occurred over the entire twentieth century).
- By 2100, the models project temperature increases between 3.6 and 9°F.

According to the 2009 California Climate Adaptation Strategy, the impacts of climate change in California have the potential to include, but are not limited to, the areas discussed in **Table 3.7-3**.

TABLE 3.7-3
POTENTIAL STATEWIDE IMPACTS FROM CLIMATE CHANGE

Potential Statewide Impact	Description
Public Health	Climate change is expected to lead to an increase in ambient (i.e., outdoor) average air temperature, with greater increases expected in summer than in winter months. Larger temperature increases are anticipated in inland communities as compared to the California coast. The potential health impacts from sustained and significantly higher than average temperatures include heat stroke, heat exhaustion, and the exacerbation of existing medical conditions such as cardiovascular and respiratory diseases, diabetes, nervous system disorders, emphysema, and epilepsy. Numerous studies have indicated that there are generally more deaths during periods of sustained higher temperatures, and these are due to cardiovascular causes and other chronic diseases. The elderly, infants, and socially isolated people with pre-existing illnesses who lack access to air conditioning or cooling spaces are among the most at risk during heat waves.
Floods and Droughts	The impacts of flooding can be significant. Results may include population displacement, severe psychosocial stress with resulting mental health impacts, exacerbation of pre-existing chronic conditions, and infectious disease. Additionally, impacts can range from a loss of personal belongings, and the emotional ramifications from such loss, to direct injury and/or mortality. Drinking water contamination outbreaks in the United States are associated with extreme precipitation events. Runoff from rainfall is also associated with coastal contamination that can lead to contamination of shellfish and contribute to food-borne illness. Floodwaters may contain household, industrial, and agricultural chemicals, as well as sewage and animal waste. Flooding and heavy rainfall events can wash pathogens and chemicals from contaminated soils, farms, and streets into drinking water supplies. Flooding may also overload storm and wastewater systems, or flood septic systems, also leading to possible contamination of drinking water systems. Drought impacts develop more slowly over time. Risks to public health that Californians may face from drought include impacts on water supply and quality, food production (both agricultural and commercial fisheries), and risks of waterborne illness. As surface water supplies are reduced as a result of drought conditions, the amount of groundwater pumping is expected to increase to make up for the water shortfall. The increase in groundwater pumping has the potential to lower the water tables and cause land subsidence. Communities that utilize well water will be adversely affected by drops in water tables or through changes in water quality. Groundwater supplies have higher levels of total dissolved solids compared to surface waters. This introduces a set of effects for consumers, such as repair and maintenance costs associated with mineral deposits in water heaters and other plumbing fixtures, and on public water system infrastructure designed

Potential Statewide Impact	Description
	for lower salinity surface water supplies. Drought may also lead to increased concentration of contaminants in drinking water supplies.
Water Resources	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. The state can expect to experience more frequent and larger floods and deeper droughts. Rising sea level will threaten the Delta water conveyance system and increase salinity in near-coastal groundwater supplies. Planning for and adapting to these simultaneous changes, particularly their impacts on public safety and long-term water supply reliability, will be among the most significant challenges facing water and flood managers this century.
Forests and Landscapes	Global climate change has the potential to intensify the current threat to forests and landscapes by increasing the risk of wildfire and altering the distribution and character of natural vegetation. If temperatures rise into the medium warming range, wildfire occurrence statewide could increase from 57% to 169% by 2085. However, since wildfire risk is determined by a combination of factors, including precipitation, winds, temperature, and landscape and vegetation conditions, future risks will not be uniform throughout the state.

Source: CNRA 2009

ENERGY CONSUMPTION

Electricity

California

In 2012, California used over 259,600 gigawatts of electricity (EIA 2013).[1] California's electricity generation system currently generates over 200,000 gigawatt hours of electricity each year, which is transported over California's 32,000 miles of transmission lines (CEC 2014a). In 2011, California produced 70 percent of the electricity it uses; the rest was imported from the Pacific Northwest (10 percent) and the Southwest (20 percent).

By 2020, electricity consumption in the state is projected to reach as much as 322,760 gigawatts (CEC 2012). In 2011, this electricity was produced from power plants fueled by natural gas (53 percent), nuclear (15.7 percent), large hydrologic sources (14.6 percent), coal (1.7 percent), and renewable methods (14.6 percent). It is noted that the San Onofre nuclear power plant became idle (in 2012) when a tube break in one of the generators released traces of radiation. Due to a design defect in the steam generators, Unit 3 will be idled for several years, and Southern California Edison must demonstrate to the Nuclear Regulatory Commission that Unit 2 will be safe to operate within its mitigation measures. The idling of the San Onofre nuclear power plant results in the loss of 2,200 megawatts (MW) of generating capacity (CEC 2013a).

Electricity usage varies substantially by the type of uses, type of construction materials used, and the efficiency of all electricity-consuming devices within a building. Electricity supply in California involves a complex grid of power plants and transmission lines located in the western United

[1] Energy usage is typically quantified using the British thermal unit (BTU). As points of reference, the approximate amount of energy contained in a gallon of gasoline, a cubic foot of natural gas, and a kilowatt hour (kWhr) of electricity are 124,884 BTUs, 1,000 BTUs, and 3,400 BTUs, respectively.

States, Canada, and Mexico. Approximately 30 percent of the electricity used in California is imported from 11 other western states as well as from Canada and Mexico. The issue is complicated by market forces that have become prominent since 1998, when a new regulatory environment commonly referred to as "deregulation" took effect in California. Supply is further complicated by the fact that the peak demand for electricity is significantly higher than the off-peak demand. For example, in August 2004, peak electric demand—due in large part to hot weather—reached a record high of 44,497 megawatts, which is almost double the lowest demand period.

County of San Luis Obispo

Electric service in the county is provided by Pacific Gas and Electric (PG&E). PG&E provides electric service to approximately 15 million people throughout a 70,000-square-mile service area in Northern and Central California (PG&E 2014a). Electricity purchased from PG&E by local customers in San Luis Obispo County is generated and transmitted to the area by a statewide network of power plants and transmission lines. Various transmission and distribution lines traverse the county, serving to carry electrical power from power plants both inside and outside the county to electrical substations where power is converted to voltages suitable for distribution to end users.

Natural Gas

California

In 2012, California consumed about 12,970 million therms of natural gas (CEC 2013b). As a state, California is the second largest natural gas consumer in the United States, representing more than 10 percent of national natural gas consumption. Customers in the residential and commercial sectors, referred to as "core" customers, accounted for 30 percent of the state's natural gas demand in 2012 (CEC 2013c). Large consumers such as electricity generators and the industrial sector, referred to as "noncore" customers, accounted for about 70 percent of demand in the same year (CEC 2013c). California remains heavily dependent on natural gas to generate electricity, which accounted for more than 45 percent of natural gas demand in 2008 (CEC 2013c). Approximately 12 percent of the natural gas produced in 2010 was within California, with the balance imported via pipeline from other states and Canada (CEC 2011). California is at the farthest end of those pipelines, forcing it to compete with other states that are located closer to generation plants in Canada for supplies.

As with electricity, natural gas usage in California for different land uses varies substantially by the type of use, the type of construction materials, and the efficiency of all gas-consuming devices in a given building.

Natural gas has become an increasingly important source of energy since more of the state's power plants rely heavily on this fuel. While California's successful efficiency programs and its reliance on renewable sources of electricity should slow the demand of natural gas, competition for the state's imported supply is increasing. This reliance on imported gas leaves the state vulnerable to price shocks and supply disruptions. By 2020, natural consumption in the state is projected to reach as much as 13,648 million therms (CEC 2012).

San Luis Obispo County

Natural gas service in the county is provided by Southern California Gas Company, which is the nation's largest natural gas distribution utility, providing natural gas energy to 20.9 million

consumers through 5.8 million meters in more than 500 communities (SoCalGas 2014). The company's service territory encompasses approximately 20,000 square miles in diverse terrain throughout Central and Southern California, from Visalia to the Mexican border (SoCalGas 2014). Southern California Gas Company provides natural gas service on an as-needed basis regulated by the California Public Utilities Commission (CPUC).

Energy Conservation

California's renewable electricity goals are among the highest in the nation. The state's Renewables Portfolio Standard aims to increase the percentage of renewable energy in the state's electricity mix to 33 percent by 2020. The Renewables Portfolio Standard and other state energy-conserving policies are sending clear market signals to investors and project developers regarding the state's support for renewable energy. Two-thirds of California's venture capital investment in clean technology is in energy generation, storage, and infrastructure, and the state is the national leader in wind and solar patents. As of December 2010, project developers were proposing 345 new renewable power plants in California (CEC 2010).

Vehicle Energy Consumption

California's transportation system includes 27 million registered vehicles (cars, trucks, trailers, and motorcycles) and 172,138 miles of roads maintained by local, state, and federal governments. A total of 15,159 miles are state routes and 2,453 miles are interstate freeways. The state's motor vehicle fleet includes private passenger cars as well as buses, motorcycles, and light- and heavy-duty trucks, which are used for passenger and freight movement, respectively. In 2009, approximately 18 billion gallons of gasoline was consumed in California (FHA 2011).

3.7.2 REGULATORY SETTING

STATE

California has adopted various administrative initiatives and also enacted a variety of legislation relating to climate change, much of which sets aggressive goals for GHG emissions reductions within the state. However, none of this legislation provides definitive direction regarding the treatment of climate change in environmental review documents prepared under CEQA. In particular, the State CEQA Guidelines do not require or suggest specific methodologies for performing an assessment or specific thresholds of significance and do not specify GHG reduction mitigation measures. Instead, the guidelines allow lead agencies to choose methodologies and make significance determinations based on substantial evidence, as discussed in further detail below. In addition, no state agency has promulgated binding regulations for analyzing GHG emissions, determining their significance, or mitigating significant effects in CEQA documents. Thus, lead agencies exercise their discretion in determining how to analyze GHGs.

The discussion below provides a brief overview of California Air Resources Board (CARB) and Office of Planning and Research (OPR) documents and of the primary legislation relating to climate change that may affect the emissions associated with the proposed RESP. It begins with an overview of the primary regulatory acts that have driven GHG regulation and analysis in California.

Executive Order S-3-05 (Statewide GHG Targets)

California Executive Order S-03-05 (2005) mandates a reduction of GHG emissions to 2000 levels by 2010, to 1990 levels by 2020, and to 80 percent below 1990 levels by 2050. Although the 2020 target has been incorporated into legislation (AB 32), the 2050 target remains only a goal of the Executive Order.

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

The California Global Warming Solutions Act of 2006 (AB 32) (Health and Safety Code Sections 38500, 38501, 28510, 38530, 38550, 38560, 38561–38565, 38570, 38571, 38574, 38580, 38590, 38592–38599) instructs CARB to develop and enforce regulations for the reporting and verifying of statewide GHG emissions. The act directed CARB to set a GHG emissions limit based on 1990 levels, to be achieved by 2020. The bill set a timeline for adopting a scoping plan for achieving GHG reductions in a technologically and economically feasible manner.

The heart of the bill is the requirement that statewide GHG emissions be reduced to 1990 levels by 2020 (1990 levels have been estimated to equate to 15 percent below 2005 emission levels). Based on CARB's calculations of emissions levels, California must reduce GHG emissions by approximately 15 percent below 2005 levels to achieve this goal.

AB 32 Scoping Plan

CARB adopted the Scoping Plan to achieve the goals of AB 32. The Scoping Plan establishes an overall framework for the measures that will be adopted to reduce California's GHG emissions. At that time, CARB determined that achieving the 1990 emissions level would require a reduction of GHG emissions of approximately 29 percent below what would otherwise occur in 2020 in the absence of new laws and regulations (referred to as "business as usual"). The Scoping Plan evaluates opportunities for sector-specific reductions, integrates all CARB and Climate Action Team early actions and additional GHG reduction measures by both entities, identifies additional measures to be pursued as regulations, and outlines the role of a cap-and-trade program. Additional development of these measures and adoption of the appropriate regulations occurred through the end of year 2013. The key elements of the Scoping Plan include:

- Expanding and strengthening existing energy efficiency programs, as well as building and appliance standards.
- Achieving a statewide renewables energy mix of 33 percent.
- Developing a California cap-and-trade program that links with other Western Climate Initiative partner programs to create a regional market system and caps sources contributing 85 percent of California's GHG emissions.
- Establishing targets for transportation-related GHG emissions for regions throughout California, and pursuing policies and incentives to achieve those targets.
- Adopting and implementing measures pursuant to existing state laws and policies, including California's clean car standards, heavy-duty truck measures, and the Low Carbon Fuel Standard.
- Creating targeted fees, including a public goods charge on water use, fees on high global warming potential gases, and a fee to fund the administrative costs of the State of California's long-term commitment to AB 32 implementation (CARB 2008).

In 2012, CARB released revised estimates of the expected 2020 emissions reductions. The revised analysis relies on emissions projections updated in light of current economic forecasts which account for the economic downturn since 2008 as well as reduction measures already approved and put in place relating to future fuel and energy demand, in addition to other factors. This reduced the projected 2020 emissions from 596 million metric tons (MMT) CO_2e to 507 $MMTCO_2e$. The reduction in projected 2020 emissions means that the revised business-as-usual (BAU) reduction necessary to achieve AB 32's goal of reaching 1990 levels by 2020 is now 16 percent.

Assembly Bill 1493 and Advanced Clean Cars Program

Assembly Bill 1493 ("the Pavley Standard," or AB 1493, 2005) (Health and Safety Code Sections 42823 and 43018.5) aimed to reduce GHG emissions from noncommercial passenger vehicles and light-duty trucks of model years 2009–2016. The bill also required the California Climate Action Registry to develop and adopt protocols for the reporting and certification of GHG emissions reductions from mobile sources for use by CARB in granting emissions reduction credits. The bill authorized CARB to grant emissions reduction credits for reductions in GHG emissions prior to the date of enforcement of regulations, using model year 2000 as the baseline for reduction.

In 2012, CARB approved the Advanced Clean Cars Program, a new emissions-control program for model years 2017–2025. The program combines the control of smog, soot, and GHG emissions with requirements for greater numbers of zero-emission vehicles. By 2025, when the rules will be fully implemented, new automobiles will emit 34 percent fewer global warming gases and 75 percent fewer smog-forming emissions.

Low Carbon Fuel Standard

Executive Order S-01-07 (2007) requires a 10 percent or greater reduction in the average fuel carbon intensity for transportation fuels in California regulated by CARB. CARB identified the Low Carbon Fuel Standard (LCFS) as a discrete early action item under AB 32. The regulation took effect in 2010 and is codified at Title 17, California Code of Regulations, Sections 95480–95490. The LCFS will reduce greenhouse gas emissions by reducing the carbon intensity of transportation fuels used in California by at least 10 percent by 2020. Carbon intensity is a measure of the GHG emissions associated with the various production, distribution, and use steps in the "life cycle" of a transportation fuel.

Renewables Portfolio Standard (Senate Bill 1078, Senate Bill 107, and Senate Bill X1-2)

Established in 2002 under Senate Bill (SB) 1078, and accelerated in 2006 under SB 107 and again in 2011 under SBX1-2, California's Renewables Portfolio Standard (RPS) requires retail sellers of electric services to increase procurement from eligible renewable energy resources to 33 percent of total retail sales by 2020. The 33 percent standard is consistent with the RPS goal established in the Scoping Plan. As an interim measure, the RPS requires 25 percent of retail sales to be sourced from renewable energy by 2016.

As previously stated, electric service in San Luis Obispo County is provided by PG&E, which is subject to the RPS. From 2005 to 2012, PG&E increased its purchase of renewable source–generated electricity to levels that currently account for just over half of its total power mix (PG&E 2014b). Renewable sources of electricity produced in the county include the California Valley Solar Ranch, a 250-megawatt photovoltaic solar electric system located at the northeastern edge of the Carrizo Plain, in southeastern San Luis Obispo County. The energy generated is under a 25-year contract to PG&E and assists to achieve PG&E's renewable energy delivery requirement, as mandated by the RPS. Additionally, the Topaz Solar Farm is a 550-

megawatt system located on the northwestern corner of the Carrisa Plains. The energy generated is also under a long-term contract to PG&E.

Senate Bill 375

SB 375 (codified in the Government Code and Public Resources Code[2]) took effect in 2008 and provides a new planning process to coordinate land use planning, regional transportation plans, and funding priorities in order to help California meet the GHG reduction goals established in AB 32. SB 375 includes provisions for streamlined CEQA review for some infill projects such as transit-oriented development. SB 375 also requires metropolitan planning organizations (MPOs) to incorporate a sustainable communities strategy (SCS) in their regional transportation plans that will achieve GHG emissions reduction targets by reducing vehicle miles traveled from light-duty vehicles through the development of more compact, complete, and efficient communities. The MPO with jurisdiction in the project area is the San Luis Obispo Council of Governments (SLOCOG). In 2010, SLOCOG adopted its Regional Transportation Plan (RTP)/Preliminary Sustainable Communities Strategy (SCS). The 2010 RTP update incorporates some of the requirements of the Sustainable Communities and Climate Protection Act (SB 375, enacted in 2008), which requires each of the 18 MPOs in California to develop a Sustainable Communities Strategy as a fourth element of the Regional Transportation Plan (to go along with the existing policy, action, and financial elements). SLOCOG was not required to develop an SCS as part of this RTP update, and therefore did not include all the requirements of SB 375. As such, the planning document has been termed a Preliminary Sustainable Communities Strategy.

SB 375 is similar to the Regional Blueprint Planning Program, established by the California Department of Transportation (Caltrans), which provides discretionary grants to fund regional transportation and land use plans voluntarily developed by MPOs working in cooperation with councils of governments. The Scoping Plan relies on the requirements of SB 375 to implement the carbon emissions reductions anticipated from land use decisions.

For the area under SLOCOG jurisdiction, CARB adopted regional targets for reduction of GHG emissions by 8 percent per capita for 2020 and 8 percent per capita for 2035 (ILG 2014).

California Building Energy Efficiency Standards

Energy conservation standards for new residential and nonresidential buildings were originally adopted by the California Energy Resources Conservation and Development Commission in June 1977 and most recently revised in 2008 (Title 24, Part 6 of the California Code of Regulations). In general, Title 24 requires the design of building shells and building components to conserve energy. The standards are updated periodically to allow consideration and possible incorporation of new energy efficiency technologies and methods.

In 2008, the California Building Standards Commission adopted the nation's first green building standards. The California Green Building Standards Code (Part 11, Title 24) was adopted as part of the California Building Standards Code (Title 24, California Code of Regulations).

Part 11 establishes voluntary standards on planning and design for sustainable site development, energy efficiency (in excess of the California Energy Code requirements), water conservation, material conservation, and internal air contaminants. Current mandatory standards include:

[2] Senate Bill 375 is codified at Government Code Sections 65080, 65400, 65583, 65584.01, 65584.02, 65584.04, 65587, 65588, 14522.1, 14522.2, and 65080.01 as well as Public Resources Code Sections 21061.3 and 21159.28 and Chapter 4.2.

- Twenty (20) percent mandatory reduction in indoor water use, with voluntary goal standards for 30, 35, and 40 percent reductions.
- Separate water meters for nonresidential buildings' indoor and outdoor water use, with a requirement for moisture-sensing irrigation systems for larger landscape projects.
- Diversion of 50 percent of construction waste from landfills, increasing voluntarily to 65 and 75 percent for new homes and 80 percent for commercial projects.
- Wastewater reduction measures including the requirement that each building reduce the generation of wastewater through the installation of water conservation fixtures or using non-potable water systems.
- Mandatory inspections of energy systems (i.e., heat furnace, air conditioner, mechanical equipment) for nonresidential buildings over 10,000 square feet to ensure that all are working at their maximum capacity according to their design efficiencies.
- Low-pollutant-emitting interior finish materials such as paints, carpet, vinyl flooring, and particleboard.

The California Energy Commission recently adopted changes to the 2013 Building Energy Efficiency Standards contained in the California Code of Regulations, Title 24, Part 6 (also known as the California Energy Code) and associated administrative regulations in Part 1 (collectively referred to here as the standards). The amended standards are anticipated to take effect in late 2014. The 2013 Building Energy Efficiency Standards are 25 percent more efficient than previous standards for residential construction and 30 percent better for nonresidential construction. The standards offer builders better windows, insulation, lighting, ventilation systems, and other features that reduce energy consumption in homes and businesses. Energy-efficient buildings require less electricity; therefore, increased energy efficiency reduces fossil fuel consumption and decreases GHG emissions.

LOCAL

San Luis Obispo County Air Pollution Control District

The San Luis Obispo County Air Pollution Control District (SLOAPCD) monitors air quality and regulates stationary emission sources in the county. As a responsible agency under CEQA, the SLOAPCD reviews and approves environmental documents prepared by other lead agencies or jurisdictions to reduce or avoid impacts associated with GHG generation and to ensure that the lead agency's environmental document is adequate to fulfill CEQA requirements. As a responsible agency, the SLOAPCD comments on environmental documents and suggests mitigation measures to reduce GHG-related impacts.

San Luis Obispo County Air Pollution Control District GHG Thresholds

In 2012, the SLOAPCD issued Greenhouse Gas Thresholds and Supporting Evidence, establishing a GHG emission threshold for projects in the county. As dictated by the SLOAPCD thresholds, residential and commercial projects need to be evaluated in terms of project compliance with a qualified GHG reduction strategy, a numeric threshold of 1,150 metric tons of CO_2e, or a efficiency threshold of 4.9 metric tons of CO_2e per service population annually (service population equals project residents plus employees). Industrial projects need to be evaluated in terms of a numeric threshold of 10,000 metric tons of CO_2e annually. If it is the case that project-generated GHG emissions surpass significance thresholds, the GHG evaluation must identify

appropriate actions the proposed Program must include in order to mitigate GHG impacts to a level below the threshold.

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

The Conservation and Open Space Element contains specific GHG emission policies. These policies are intended to encourage a reduction in the amount of GHG emissions generated in the unincorporated county. According to the Conservation and Open Space Element, San Luis Obispo County has abundant resources that can be and are used to generate energy. Only a small portion of the wind, solar, and biomass potential in the county is currently used. The Conservation and Open Space Element suggests that the development of local resources may offer the best alternatives to importing large amounts of energy from other areas of the state.

Current policies in the Conservation and Open Space Element emphasize the development of renewable energy. These policies do not identify any location- or site-specific considerations. Rather, they encourage renewable energy with policies that range from prioritization of renewable energy to indirect support of renewable energy. For instance, indirect support of renewable energy is expressed in General Plan Conservation and Open Space Element Policy E 6.1, which suggests promoting the development of renewable energy projects through streamlined planning and development rules, codes, processing, and other incentives. Associated Implementation Strategy E 6.1.1 recommends that the County eliminate obstacles to renewable energy use in the county by revising County policies and regulations as needed to eliminate barriers to or unreasonable restrictions on the use of renewable energy. Policy E 6.2 supports the development of solar and wind power and other renewable energy systems as commercial energy enterprises. Implementation Strategy E 6.2.2 encourages the development of wind power facilities in areas where wind speeds make commercial wind power feasible. Policy E 5.3 encourages biomass facilities. The Conservation and Open Space Element prioritizes renewable energy development with Policy E 6.9, which states that where renewable energy resources have been identified and mapped, renewable energy shall be given high priority while balancing the protection of other environmental resources. Policy E 6.8 suggests the designation of protection areas that contain renewable energy resources such as wind, solar, geothermal, and small hydroelectric.

County of San Luis Obispo EnergyWise Plan

The County's EnergyWise Plan identifies how the County will achieve the GHG emissions reduction target of 15 percent below baseline levels by the year 2020 in addition to other energy efficiency, water conservation, and air quality goals. The County selected 2020 as the forecast year or planning horizon for implementation of the EnergyWise Plan and achievement of the GHG reduction target. Selection of 2020 as the forecast year is also consistent with the State's forecast year established in AB 32. A second reduction forecast year of 2035 is included in the forecasts.

Specifically, the EnergyWise Plan:

- Provides the scientific and regulatory framework for addressing climate change and GHGs at the local level.
- Identifies sources of GHG emissions within the unincorporated county and estimates how these emissions may change over time.
- Forecasts emissions to reflect the County's desired population projections without regulatory or technical intervention to reduce GHG emissions.

- Provides an emissions reduction target consistent with AB 32 and the County's General Plan.
- Provides energy use, transportation, land use, water use, and solid waste strategies to reduce community-wide GHG emissions.
- Quantifies the potential emissions reductions that will be achieved by implementing and identifies relative costs and savings of each strategy.
- Identifies existing and proposed strategies to reduce GHG emissions from County operations and facilities, quantifies the potential emissions reductions, and identifies relative costs and savings of each strategy.
- Provides methods for reducing the County's GHG emissions consistent with the State's goals and Public Resources Code Section 21083.3. The CEQA Guidelines encourage the adoption of policies or programs as a means of comprehensively addressing the cumulative impacts of projects.
- Proposes an adaptation approach to increase the county's resiliency to climate change.
- Presents an implementation program to assist with monitoring and prioritization of the reduction strategies through 2020.

EnergyWise Reduction Measure 10 calls for the development of a comprehensive renewable energy strategy to encourage the commercial-scale installation of renewable energy projects in the county. Additionally, the EnergyWise Plan contains the goal of increasing the production of renewable energy from small-scale and commercial-scale renewable energy installations to account for 10 percent of the total local energy use in the county by 2020.

San Luis Obispo County Green Building Ordinance

The County's Green Building Ordinance (Title 19 of the County Code, adopted 2012) requires new construction to meet additional water conservation standards and energy standards that exceed state requirements.

New nonresidential buildings are required to exceed Title 24 energy standards with LEED certification or by achieving CALGreen Tier 1 standards, equivalent to a 15 percent improvement in energy efficiency. Section 19.08.050 further requires new nonresidential buildings to design for renewable energy systems. The building must identify a kilowatt (kW) system rating with a conduit system or area designated for future renewable energy generation.

New residential buildings must complete green building measures and accommodate installation of future renewable energy generation systems. However, unlike new nonresidential buildings, new residential buildings are not required to exceed Title 26, Part 6 energy standards. Similar to new nonresidential buildings, new residential buildings must provide an accessible conduit system to accommodate future renewable energy generation.

Summary of Local Regulations and Policies

Table 3.7-4 summarizes regulations and policies from the documents described above.

TABLE 3.7-4
LOCAL POLICIES AND REGULATIONS FOR GREENHOUSE GASES

Applicable Code Section	Summary
Countywide	
Land Use and Circulation Element, Principle 1, Policy 5	Conserve energy resources by: a. Planning for energy efficiency and conservation in land use and transportation, and in subdivision and building regulations. b. Decreasing reliance on environmentally costly energy sources, increasing conservation efforts, and encouraging use of alternative energy sources.
Conservation and Open Space Element, Policy AQ 4.3	Actively work to reduce greenhouse gas emissions from County operations, specifically in the sectors of energy, transportation, and waste, as identified in the 2006 Greenhouse Gas Emissions Baseline Inventory Report.
Conservation and Open Space Element, Policy AQ 4.4	Reduce greenhouse gas emissions from development projects and other land use activities.
Conservation and Open Space Element, Policy AQ 4.5	Reduce net carbon emissions through the preservation, protection, and enhancement, as appropriate, of the county's terrestrial and aquatic carbon sequestration resources, including the county's lakes, soils, and native forests, trees, and plants
Conservation and Open Space Element, Policy AQ 4.6	Collaborate and coordinate with regional organizations and local jurisdictions to reduce greenhouse gas emissions.
Conservation and Open Space Element, Policy E 1.3	Seek to use renewable energy to power County facilities.
Conservation and Open Space Element, Policy E 1.4	Increase the use of methane as an energy source from wastewater treatment plants and active and inactive, closed landfills.
Conservation and Open Space Element, Policy E 1.5	Encourage waste-burning biomass facilities and conversion technologies as methods of producing electrical energy without endangering resource recovery programs where environmental and air quality are protected and the facility is compatible with adjoining uses.
Conservation and Open Space Element, Policy E 3.1	Ensure that new and existing development incorporates renewable energy sources such as solar, passive building, wind, and thermal energy. Reduce reliance on non-sustainable energy sources to the extent possible using available technology and sustainable design techniques, materials, and resources.
Conservation and Open Space Element, Policy E 3.3	Promote the use of renewable energy systems to pump and treat water and wastewater.
Conservation and Open Space Element, Policy E 6.1	Promote the development of sustainable energy sources and renewable energy projects through streamlined planning and development rules, codes, processing, and other incentives.
Conservation and Open Space Element, Policy E 6.2	Encourage and support the development of solar and wind power and other renewable energy systems as commercial energy enterprises.

Applicable Code Section	Summary
Conservation and Open Space Element, Policy E 6.3	Develop renewable energy resources in the county, including the safe, effective, and efficient use of small wind energy systems, solar power systems, passive solar buildings, and other renewable energy systems designed for on-site home, farm, and commercial use.
Conservation and Open Space Element, Policy E 6.4	Use solar electric power generating facilities, especially in areas remote from utility services and in places where such systems can meet specialized power needs cost effectively.
Conservation and Open Space Element, Policy E 6.6	Encourage distributed energy resources to increase the efficiency of the power and transmission system and use of local renewable fuel sources.
Conservation and Open Space Element, Policy E 6.7	Encourage cogeneration facilities as a method of reducing overall energy use.
Conservation and Open Space Element, Policy E 6.8	Designate and protect areas that contain renewable energy resources such as wind, solar, geothermal, and small hydroelectric.
Conservation and Open Space Element, Policy E 6.9	Renewable energy is developed most effectively where sufficient renewable energy resources exist (e.g., solar energy requires a certain amount of sunlight to be efficient and wind energy requires a certain amount of wind.) In areas where renewable energy resources have been identified and mapped pursuant to Policy E 6.8, renewable energy development is dependent on the mapped resource and shall be given high priority while balancing the protection of other environmental resources.
Conservation and Open Space Element, Policy E 7.1	Energy, fossil fuel, and related facilities will be sited, constructed, and operated in a manner to protect the public from potential hazards and significant environmental impacts.
Title 19, Section 19.08.040	New residential buildings: accommodate installation future renewable energy generation systems.
Title 19, Section 19.05.050	New nonresidential buildings: exceed Title 24 energy standards with LEED certification or achieving CALGreen Tier 1 standards, and install conduit system or area designated for future renewable energy generation.
Carrizo Planning Area	
No additional policies or codes specific to the Carrizo Planning Area.	
North County Planning Area	
No additional policies or codes specific to the North County Planning Area.	
San Luis Obispo Planning Area	
No additional policies or codes specific to the San Luis Obispo Planning Area.	
South County Planning Area	
No additional policies or codes specific to the South County Planning Area.	

3.7.3 IMPACTS AND MITIGATION MEASURES

THRESHOLDS OF SIGNIFICANCE

Impacts related to climate change are considered significant if implementation of the proposed project would result in any of the following:

1) Generate greenhouse gas emissions that exceed thresholds as established by the County Air Pollution Control District.

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

METHODOLOGY

The impact analysis below utilizes the County of San Luis Obispo's General Plan policy provisions and SLOAPCD guidance to determine whether implementation of the proposed RESP would result in a significant environmental greenhouse gas–related impact.

IMPACTS AND MITIGATION MEASURES

Generate Greenhouse Gas Emissions That Exceed Thresholds as Established by the County Air Pollution Control District (Threshold 1)

Short-Term Construction Emissions

Construction-generated emissions are short term and of temporary duration, lasting only as long as construction activities occur. Potential development anticipated by the proposed Program would result in direct emissions of GHGs from construction.

Long-Term Operational Emissions

The renewable energy-generating facilities allowed under the proposed Program produce energy that has minimal emissions. One of the obvious benefits of solar and wind energy is that the production of electricity from these sources involves almost no direct emissions of GHG emissions, with minimal emissions from worker trips and equipment usage associated with ongoing operations, maintenance, repair, and security. In contrast, fossil fuel–fired electric generation from coal, oil, or natural gas results in substantial direct emissions of GHGs that contribute to adverse impacts on the environment. For instance, electric generation from fossil fuel–fired power plants contributes 39 percent of CO_2 emissions and 22 percent of nitrogen oxide emissions in the United States (DOE 2008). Renewable energy-generating facilities reduce emissions by decreasing the need for energy from fossil fuel–based power plants in the state, which is considered a beneficial impact statewide.

As discussed in Section 3.12, Effects Determined Not Significant, implementation of solar electric facilities (SEFs) and wind energy conversion system (WECS) facilities would require a variety of transportation activities over the life of a project. Ongoing operations and maintenance of renewable energy-generating facilities would require worker commutes and deliveries of supplies.

Impact 3-7-1 – Solar/Wind Implementation of proposed solar and wind energy facilities could result in a substantial net increase in GHG emissions. This impact is **less than significant (Class III)**.

Solar energy projects developed under the project would include solar photovoltaic panels mounted on rooftops of other structures as well as small to medium-sized ground-mounted systems. The proposed Program would also allow WECS facilities that are mounted to rooftops of existing structures. The development of such facilities would result in direct emissions of GHGs from construction. While some GHG emissions would be generated during the operation of renewable energy facilities from worker trips and equipment usage associated with ongoing operations, maintenance, repair, and security, such emissions would be negligible. As stated in Section 2.0, Project Description, it is likely that up to 3 personnel would be required to service and maintain each Tier 1 SEF, Tier 2 SEF, and Tier 3 SEF facility, which represents levels well below thresholds established by APCD

While it is not possible to establish the exact proportion of the proposed Program that would be solar projects and wind projects, current renewable energy trends and the renewable resources in the county were considered, and it is assumed that the majority of renewable energy facilities allowed under the proposed Program would be solar projects, with minor numbers of wind projects. The total land footprint assumed for development of these projects is 1,500 acres. For the purposes of this analysis, it is assumed that development of these 1,500 acres would occur over a period of 10 years.

Predicted maximum construction-generated emissions are summarized in **Table 3.7-5** and compared with the SLOAPCD significance threshold for GHG emissions. In accordance with the SLOAPCD threshold determination, projected GHGs from construction activities have been amortized over the life of project operations (30 years). The projected criteria pollutant emissions resulting from construction activities were estimated by PMC using the California Emissions Estimator Model (CalEEMod). CalEEMod is a statewide land use emissions computer model designed to quantify potential criteria pollutant emissions associated with both construction and operations from a variety of land use projects. Results of the modeling conducted by PMC are included in **Appendix 4**.

TABLE 3.7-5
PROJECT CONSTRUCTION GHG EMISSIONS

Construction Phase (based on the development of 1,500 acres of land over a 10-year period)	CO_2e
Total Construction Emissions Over 10 Years[1]	6,260
Total Construction Emissions per Year Amortized Over 30 Years of Project Life[2]	209
SLOAPCD Annual Significance Thresholds	**1,150**
Exceed Level Thresholds?	No

*Source: Emissions modeled by PMC using the CalEEMod computer program. See **Appendix 3.7** for modeling outputs.*

*[1] The total land footprint assumed from development is 1,500 acres, and it is assumed that development of this acreage would occur over a period of 10 years. For the purpose of modeling 10 years of GHG emission generation, acreage has been divided by 10 in order to depict the average amount of generated GHG emissions from one year of development. Therefore, the annual emission outputs presented in **Appendix 3.7** are representative of one year of construction involving 150 acres. In order to obtain the total amount of construction-generated GHG emissions over 10 years and that accounts for the development of the total 1,500 acres, annual emission outputs presented in **Appendix 3.7** are multiplied by 10.*

[2] Total construction emissions over a 10-year period are then amortized over 30 years of project life in accordance with SLOAPCD guidance (i.e. 6,260/30)

As shown, construction-generation GHG emissions, amortized over the life of the project per SLOAPCD guidance, would not surpass SLOAPCD significance thresholds; therefore, the impact would be **less than significant (Class III)**. In addition, renewable energy-generating facilities reduce emissions by decreasing the need for energy from fossil fuel–based power plants throughout the state. The GHG emissions reduction realized by operation of the SEF and WECS facilities allowed under the project would more than offset the GHG emissions generated by their construction and ongoing operations. As previously stated, EnergyWise Plan Reduction Measure 10 calls for the development of a comprehensive renewable energy strategy to encourage the commercial-scale installation of renewable energy projects in the county. The proposed Program would directly implement Reduction Measure 10, which according to the County EnergyWise Plan (2011), will reduce GHG emissions by 20,610 to 41,290 metric tons annually by the year 2020.

Impact 3-7-1 – Policy Changes Implementation of the proposed Program could result in changes to countywide policies that could result in a substantial net increase in GHG emissions. This would be a **beneficial (Class IV)** impact**.**

The implementation of the proposed policy changes to the General Plan would enable streamlined reviews and approvals of SEF and WECS facility projects to be achieved either through the building permit process, zoning clearance process, or site plan review process. These facilities produce emissions-free energy and by their nature do not produce air pollutant emissions. Instead they reduce emissions by decreasing the need for energy from fossil fuel–based power plants, which is considered a beneficial impact regionally and statewide. As shown in **Table 3.7-5**, predicted mitigated construction-generated emissions would not exceed SLOAPCD significance thresholds. When compared to non-renewable energy plants, the GHG emissions reduction realized by of the use of the potential SEF and WECS facilities allowed by the proposed Program would more than offset the GHG emissions generated by their construction and ongoing operations. This would be a regionally and statewide **beneficial (Class IV)** impact**.**

Conflict with any Applicable Plan, Policy, or Regulation of an Agency Adopted for the Purpose of Reducing the Emissions of Greenhouse Gases (Threshold 2)

As noted previously, AB 32 is a legal mandate requiring that statewide GHG emissions be reduced to 1990 levels by 2020. In adopting AB 32, the legislature determined the necessary GHG reductions for the State to make in order to sufficiently offset its contribution to the cumulative climate change problem to reach 1990 levels. AB 32 is the only legally mandated requirement for the reduction of GHGs. As such, compliance with AB 32 is the adopted basis on which the agency can base its significance threshold for evaluating a project's GHG impacts.

San Luis Obispo County has adopted a GHG reduction plan, the EnergyWise Plan, which is based on the AB 32 reduction target. The GHG-reducing policy provisions contained in the EnergyWise Plan were prepared with the purpose of complying with the requirements of AB 32 and achieving the goals of the AB 32 Scoping Plan. As a result, the EnergyWise Plan is consistent with statewide efforts established in CARB's Climate Change Scoping Plan to reduce statewide GHG emissions to 1990 levels by 2020. The EnergyWise Plan meets the criteria identified in the CEQA Guidelines for a GHG reduction plan. Therefore, the proposed Program is analyzed relative to the County's adopted EnergyWise Plan to determine the significance of GHG emissions and contribution to climate change.

Impact 3-7-2 – Solar/Wind Implementation of proposed solar and wind energy facilities could conflict with the County EnergyWise Plan. This would be a regionally and statewide **beneficial (Class IV)** impact.

The County's EnergyWise Plan identifies how the County will achieve the GHG emissions reduction target of 15 percent below baseline levels by the year 2020 in addition to other energy efficiency, water conservation, and air quality goals. Specifically, the County's EnergyWise Plan's renewable energy goal is to increase the production of renewable energy from small- and commercial-scale energy installations to account for 10 percent of total local energy by 2020, which as stated in Section 2.0, Project Description, is precisely one of the stated objectives of the proposed Program. Since the project proposes to directly implement the EnergyWise Plan's renewable energy goal, it would not conflict with the County EnergyWise Plan. This would be a regionally and statewide **beneficial (Class IV)** impact.

Impact 3-7-2 – Policy Changes Implementation of the proposed Program could result in changes to countywide policies that could result in a conflict with the County EnergyWise Plan. This would be a **beneficial (Class IV)** impact.

As stated above, the County's EnergyWise Plan's renewable energy goal is to increase the production of renewable energy from small- and commercial-scale energy installations to account for 10 percent of total local energy by 2020, which as stated in Section 2.0, Project Description, is precisely one of the stated objectives of the proposed Program. Since the changes to countywide policies would fulfill the EnergyWise Plan renewable energy goal, it would not conflict with the County's EnergyWise Plan. This would be a regionally and statewide **beneficial (Class IV)** impact.

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3.8 Hazards and Hazardous Materials

This section addresses the potential for the proposed Program to indirectly result in impacts related to hazardous conditions. Specific topics discussed below include emissions, handling, and disposal of hazardous materials, as well as wildland fire risk and emergency response plans.

3.8.1 PHYSICAL SETTING

HAZARDOUS MATERIALS AND WASTE

According to 22 California Code of Regulations (CCR) Section 66261.20, the term *hazardous substance* refers to both hazardous materials and hazardous wastes; both are classified according to four properties: toxicity, ignitability, corrosiveness, and reactivity. A hazardous material is defined by 22 CCR Section 66261.10 as a substance or combination of substances that may cause or significantly contribute to an increase in serious, irreversible, or incapacitating illness or may pose a substantial presence or potential hazard to human health or the environment when improperly treated, stored, transported, or disposed of, or otherwise managed.

Public health is potentially at risk whenever hazardous materials are or will be used. It is necessary to differentiate between the hazard of these materials and the acceptability of the risk they pose to human health and the environment. A hazard is any situation that has the potential to cause damage to human health and the environment. The risk to health and public safety is determined by the probability of exposure, and to the inherent toxicity of a material (DTSC 2009).

Factors that can influence health effects when human beings are exposed to hazardous materials include the dose the person is exposed to, the frequency of exposure, the duration of exposure, the exposure pathway (route by which a chemical enters a person's body), and the individual's unique biological susceptibility.

Hazardous wastes are hazardous substances that no longer have practical use, such as materials that have been discarded, discharged, spilled, or contaminated or are being stored until they can be disposed of properly (22 CCR Section 66261.10). Soil that is excavated from a site containing hazardous materials is a hazardous waste if it exceeds specific 22 CCR criteria. While hazardous substances are regulated by multiple agencies, as described under Subsection 3.8.2, Regulatory Setting, below, cleanup requirements of hazardous wastes are determined on a case-by-case basis according to the agency with lead jurisdiction over the project.

HAZARDOUS AND CONTAMINATED SITES

Hazardous materials consist of substances that by their nature, lack of containment, and reactivity have the capability for inflicting harm. Hazardous materials can be toxic, corrosive, flammable, explosive, reactive, an irritant, or a strong sensitizer and include certain infectious agents, radiological materials, oxides, oil, used oil, petroleum products, and industrial solid waste substances. They are used in almost every manufacturing operation and by retailers, service industries, and homeowners. Hazardous material incidents are one of the most common technological threats to public health and the environment. Incidents may occur as the result of natural disasters, human error, or accident. Hazardous material incidents typically take three forms:

- **Fixed facility incidents** – It is reasonably possible to identify and prepare for a fixed site incident, because laws require those facilities to notify state and local authorities about what is being used or produced there.

- **Transportation incidents** – Transportation incidents are more difficult to prepare for because it is impossible to know what materials could be involved until an accident actually happens.
- **Pipeline incidents** – Pipelines carry natural gas and petroleum. Breakages in pipelines carry differing amounts of danger, depending on where and how the break occurs and what is in the pipe.

Areas of Known Hazardous Contamination

Cortese List

The State of California Hazardous Waste and Substances Site List (also known as the Cortese List) is a planning document used by state and local agencies and by private developers to comply with the requirements of the California Environmental Quality Act (CEQA) in providing information about the location of hazardous materials sites. California Government Code Section 65962.5 requires the California Environmental Protection Agency to annually update the Cortese List. The Department of Toxic Substances Control (DTSC) is responsible for preparing a portion of the information that comprises the Cortese List. Other state and local government agencies are required to provide additional hazardous material release information that is part of the complete list.

The DTSC's EnviroStor database provides the department's component of Cortese List data by identifying state response sites, federal Superfund sites, school cleanup sites, and voluntary cleanup sites. The EnviroStor database identifies sites that have known contamination or sites for which further investigation is warranted. It also identifies facilities that are authorized to treat, store, dispose, or transfer hazardous waste. There are 39 open hazardous material sites identified in the County planning areas, as listed in **Table 3.8-1**. In addition to the sites listed in **Table 3.8-1**, there are 32 permitted underground storage tanks in the unincorporated San Luis Obispo County area.

TABLE 3.8-1
OPEN HAZARDOUS MATERIAL SITES IN UNINCORPORATED SAN LUIS OBISPO COUNTY

Site/Facility Name	Site/Facility Type	Status	Address	City
Avila Tank Farm	Cleanup Program Site	Open – Assessment & Interim Remedial Action	10 San Rafael Street	Avila Beach
Avila Beach Pier	Cleanup Program Site	Open – Verification Monitoring	450 Front Street	Avila Beach
Lake Nacimiento Resort UST Release	Lust Cleanup Site	Open – Verification Monitoring	10625 Nacimiento Lake Dr.	Bradley
Lake Nacimiento Resort Pipeline Leak	LUST Cleanup Site	Open – Assessment & Interim Remedial Action	10625 Nacimiento Lake Dr.	Bradley
Private Residence	LUST Cleanup Site	Open – Site Assessment	Private Residence	California Valley
Chevron Station #9-0919	LUST Cleanup Site	Open – Verification Monitoring	2194 Main St	Cambria

Site/Facility Name	Site/Facility Type	Status	Address	City
Cambria General Store	LUST Cleanup Site	Open – Remediation	850 Main St	Cambria
Camp Roberts Solid Waste Site	Land Disposal Site	Open – Operating	Camp Roberts	Camp Roberts
Camp Roberts	Military Base			Camp Roberts
Camp Roberts Old South Landfill and Trench Fills	Land Disposal Site	Open – Closed/ Monitoring	DPW Building 3022	Camp Roberts
Chevron #9-0028	LUST Cleanup Site	Open – Eligible for Closure	12 Ocean Ave N	Cayucos
North Side State Hwy 46 @ Jack Ranch	LUST Cleanup Site	Open – Remediation	Hwy 46	Cholame
Polonio Pass Pipeline	Cleanup Program Site	Open – Site Assessment	Highway 46	Cholame
Cop Pipeline at Highway 46	Cleanup Program Site	Open – Remediation	Highway 46	Cholame
Conoco Phillips RM&R Site# 05136	Cleanup Program Site	Open – Site Assessment	Highway 41 and Highway 46	Cholame
Goodrow Composting Facility	Land Disposal Site	Open – Operating	3730 Calf Canyon Road	Creston
Conoco Philips RM&R Site# 05125	Cleanup Program Site	Open – Assessment & Interim Remedial Action	7330 Webster Rd	Creston
Conoco Philips RM&R Site# 05123	Cleanup Program Site	Open - Assessment & Interim Remedial Action	4615 Hwy 41	Creston
Unocal – Guadalupe Oilfield	Cleanup Program Site	Open – Remediation	2184 Thornberry Rd	Guadalupe
Rosie's Exxon	Lust Cleanup Site	Open – Inactive	995 Los Osos Valley Rd	Los Osos
Nipomo Creek Pipeline, Line 300 (RM&R Site No. 3788)	Cleanup Program Site	Open – Remediation	671 Oakglen Ave	Nipomo
Conoco Phillips Line 300 (RM&R Site No. 5237)	Cleanup Program Site	Open – Site Assessment	Tefft Street	Nipomo
Chevron Station 9-5867	Lust Cleanup Site	Open – Site Assessment	460 West Tefft Street	Nipomo
Bell Craig (former service station)	Lust Cleanup Site	Open – Remediation	1899 Cienega	Oceano
Chevron S/S #9-2565 (former)	LUST Cleanup Site	Open – Eligible for Closure	9540 Castillo Dr	San Simeon
Pipeline – Santa Margarita to Tassajara Creek	Cleanup Program Site	Open – Verification Monitoring	El Camino Real to Tassajara Creek Road	Santa Margarita
Rinconada Mine	Cleanup Program Site	Open – Assessment & Interim Remedial Action	Pozo Road	Santa Margarita

Site/Facility Name	Site/Facility Type	Status	Address	City
Hwy 101S Bridge & Hwy 58W	Cleanup Program Site	Open – Remediation	Southbound Hwy 101 Bridge and Hwy 58 at Santa Margarita Creek	Santa Margarita
California Valley Solar Ranch	Land Disposal Site	Open – Operating	13505 Carrisa Highway	Santa Margarita
Tassajara Creek-Spanish Oaks (Cop Pipeline)	Cleanup Program Site	Open – Verification Monitoring	East bank of Santa Margarita Creek	Santa Margarita
Conocophillips RM&R Site 05109	Cleanup Program Site	Open – Site Assessment	US 101 at CA 58	Santa Margarita
Santa Maria Airport Landfill	Land Disposal Site	Open – Inactive	Foster Rd at Blosser	Santa Maria
Kirkpatrick Property (Unocal portion)	Cleanup Program Site	Open – Verification Monitoring	950 & 1000 East Centre Street	Shandon
Pipeline Hwy 41, South of Shandon Area	Cleanup Program Site	Open – Assessment & Interim Remedial Action	Hwy 41	Shandon
Conoco Phillips Site # 4836	Cleanup Program Site	Open – Site Assessment	260 Peaceful Valley Lane	Shandon
Conoco Phillips Site # 4770	Cleanup Program Site	Open – Site Assessment	8th and Cholame	Shandon
Conoco Phillips Site # 3469	Cleanup Program Site	Open – Site Assessment	Lucy Brown Road	Shandon
Chevron (former BP)	Lust Cleanup Site	Open – Assessment & Interim Remedial Action	701 Las Tablas Rd	Templeton
Chicago Grade Landfill SWDSS	Land Disposal Site	Open – Operating	2290 Homestead Rd	Templeton

Source: SWRCB 2014

In addition to the hazardous materials listed in **Table 3.8-1**, much of unincorporated San Luis Obispo County is used for agriculture production. Historic agricultural use may indicate the presence in soils of agricultural chemicals. Agricultural chemicals used historically in the United States include a number of persistent, bioaccumulative, and toxic chemicals. Other hazardous materials sources in rural areas may include leaking underground petroleum storage tanks and leaking abandoned oil and gas wells. Waste from illegal dumping in rural areas can sometimes include hazardous waste, such as waste from clandestine drug manufacturing. In addition, motor vehicle fuel leaks from off-highway vehicle use can be a source of contaminated surface runoff or soil.

Hazardous Waste Treatment, Storage, and Disposal

The State Water Resources Control Board's (SWRCB) Land Disposal program regulates waste discharge to land for treatment, storage, and disposal in waste management units, which include waste piles, surface impoundments, and landfills. The GeoTracker database identifies two Land Disposal program sites in the Planning Area: the Camp Roberts Solid Waste Site and the Paso Robles Solid Waste Site. Both facilities are open and operating.

Household Hazardous Waste

Hazardous materials, used in many household products (such as drain cleaners, waste oil, cleaning fluids, insecticides, and car batteries), are often improperly disposed of as part of normal household trash. These hazardous materials can interact with other chemicals to create risks to people or cause soil and groundwater contamination. The California Department of Public Health defines household hazardous waste as any substance that is characteristic of one of the following:

- Ignitability – flammable (e.g., lighter fluid, spot and paint removers)
- Corrosivity – eats away materials and can destroy human and animal tissue by chemical action (e.g., oven and toilet bowl cleaners)
- Reactivity – creates an explosion or produces deadly vapors (e.g., bleach mixed with ammonia-based cleaners)
- Toxicity – capable of producing injury, illness, or damage to humans, domestic livestock, or wildlife through ingestion, inhalation, or absorption through any body surface (e.g., rat poison, cleaning fluids, pesticides, bleach)

The San Luis Obispo Integrated Waste Management Authority operates five household hazardous waste dropoff facilities in San Luis Obispo County where residents can bring household hazardous waste (SLO County IWMA 2013). These locations accept all household hazardous wastes except radioactive or explosive wastes. The locations are the Cold Canyon Landfill on State Route (SR) 227, Chicago Grade Landfill on SR 41, Morro Bay/Cayucos Waste Water Plan on Atascadero Road, Nipomo Facility on Southland, and Paso Robles Landfill on SR 46 East. These landfills are available for drop-off from households throughout the county.

Known and Unknown Hazardous Materials in the Unincorporated San Luis Obispo County Area

Asbestos-Containing Building Materials. Structures constructed or remodeled between 1930 and 1981 have the potential to contain asbestos-containing building materials (ACBM). Asbestos is the name given to a number of naturally occurring fibrous minerals with high tensile strength, the ability to be woven, and resistance to heat and most chemicals. Because of these properties, asbestos fibers have been used in a wide range of manufactured goods, including roofing shingles.

When asbestos-containing materials are damaged or disturbed by repair, remodeling, or demolition activities, microscopic fibers become airborne and can be inhaled into the lungs, where they can cause significant health problems. The current federal definition of asbestos is the asbestiform varieties of chrysotile (serpentine), crocidolite (riebeckite), amosite (cummingtonite/grunerite), anthophyllite, tremolite, and actinolite. A distinction is made between building materials that would readily release asbestos fibers when damaged or disturbed and those materials that were unlikely to result in significant fiber release. The terms *friable* and *nonfriable* are used to make this distinction. The US Environmental Protection Agency (EPA) has determined that, if severely damaged, otherwise nonfriable materials can release significant amounts of asbestos fibers. Friable asbestos-containing material (ACM) is defined by the Asbestos National Emission Standards for Hazardous Air Pollutants as any material containing more than 1 percent asbestos that, when dry, can be crumbled, pulverized, or reduced to powder by hand pressure. Friable ACM is also known as regulated asbestos-containing material (RACM). Nonfriable ACM is any material containing more than 1 percent asbestos that, when dry, cannot be crumbled, pulverized, or reduced to powder by hand pressure. If nonfriable ACM

becomes or is likely to become friable due to the forces expected to act on the materials during renovation or demolition, they become an RACM. Exposure to airborne RACM may result in a potential health risk because persons breathing the air may breathe in asbestos fibers. Continued exposure can increase the amount of fibers that remain in the lung. Fibers embedded in lung tissue over time may cause serious lung diseases including asbestosis, lung cancer, or mesothelioma (EPA 2009).

Disease Vectors. A disease vector is any organism capable of transmitting the causative agent of human disease or capable of producing human discomfort or injury, including mosquitoes, flies, fleas, cockroaches, mites, rats, or fungi. The accumulation of organic waste acts as an attractor for flies, fleas, cockroaches, and rodents and other mammals, which can be carriers of various human diseases. In addition, any depressed areas, ponds, or drainage channels provide areas for the breeding of mosquitoes, which can be carriers of West Nile virus, a potentially fatal disease in humans.

Portions of unincorporated San Luis Obispo County are known to harbor the fungus that causes coccidioidomycosis, commonly known as valley fever. This is a lung disease common in the southwestern United States and northwestern Mexico, caused by the fungus *Coccidioides immitis*, which grows in soils in areas of low rainfall, high summer temperatures, and moderate winter temperatures. These fungal spores become airborne when the soil is disturbed by winds, construction, farming, and other activities. In susceptible people and animals, infection occurs when a spore is inhaled. People working in certain occupations, such as construction, agriculture, and archaeology, have an increased risk of exposure and disease because these jobs result in the disturbance of soils where fungal spores are found. Many domestic and native animals are susceptible to the disease, including dogs, horses, cattle, coyotes, rodents, bats, and snakes. Valley fever infection rates are highest in California from June to November. Most valley fever cases are very mild. It is estimated that 60 percent or more of infected people either have no symptoms or experience flu-like symptoms and never seek medical attention.

Anthrax is a naturally occurring disease of animals (e.g., sheep, goats, and cattle) caused by the bacterium *Bacillus anthracis*. The bacteria live in the soil in many parts of the world and form protective outer coats called spores. Spores are able to withstand harsh or adverse conditions that would normally kill bacteria. Animals can get anthrax by ingesting anthrax spores from the soil. Anthrax in animals occurs worldwide but can be controlled by vaccination of animals (CDC 2009). People may acquire anthrax by contact with infected animals, and the disease in humans is potentially fatal (CDC 2009). During 1984, an anthrax outbreak occurred in the Carrizo Plain that affected 12 general areas (UC Extension 2001). Most outbreaks occur in areas where animals have previously died of anthrax, as the spores remain viable for many years; spores over 35 years old have been able to cause the disease (UC Extension 2001). Often, the outbreaks occur after climatic changes such as heavy rain, flooding, or drought. Climatic changes bring spores to the ground surface and may concentrate the spores in low spots. Working the land may also bring the spores up to the soil surface (UC Extension 2001).

Airport Operations Hazards

Airport-related hazards are generally associated with aircraft accidents, particularly during takeoffs and landings. Other airport operation hazards include incompatible land uses, power transmission lines, wildlife hazards (e.g., bird strikes), and tall structures that penetrate the imaginary surfaces surrounding an airport.

Public Airports

The San Luis Obispo County area has three publicly owned airports:

- San Luis Obispo County Regional Airport, a (CS) Commercial Service facility operated by the County. This airport is located in the San Luis Obispo Planning Area.
- Paso Robles Municipal Airport, a (GA) General Aviation facility operated by the City of Paso Robles. This airport is located in the North County Planning Area.
- Oceano Airport, a (BU) Basic Utility, general aviation facility owned by the County and operated by a concessionaire. This airport is located just west of the South County Planning Area.

Each airport has an Airport Land Use Plan that adopts safety zones surrounding the airport. The size and configuration of the zones are based on the recommendations and guidance provided in the California Airport Land Use Planning Handbook.

Private Airports

San Luis Obispo County also has a number of private airports and airstrips in the unincorporated area. These include the McMillan Airport and Roberts Ahp Heliport at Camp Roberts, Oceano County Airport, Bogdan Airport in Santa Margarita, Blech Ranch Airport in Shandon, Twin Cities Community Hospital Heliport in Templeton, and Bonel Airport in Whiteley Garden.

Wildland Fires

The term *wildfire* refers to fires that usually result from the ignition of dry grass, brush, or timber. Wildfires commonly occur in areas that are characterized by steep, heavily vegetated hillsides, which makes suppression of the fire difficult.

To describe an area where urban development has been located in proximity to open space, or wildland areas, the term *urban/wildland interface* is commonly used. The most common type of urban/wildland interface results when urban development occurs on the fringe of existing urban areas, adjacent to wildland vegetation. Other interface conditions can be created when urban development is intermixed with wildland vegetation or when pockets of wildland vegetation occur inside developed areas. The communities of Cambria and Nipomo are examples of intermixed urban/wildland interface areas (SLO County 1999).

The majority of unincorporated San Luis Obispo County has a moderate to very high fire hazard severity zone according to the California Department of Forestry and Fire Protection (Cal Fire) (2007). Significant wildfires have occurred throughout the county. Between 1931 and 1997, the county experienced 20 wildfires that burned between 10,000 and 107,000 acres (SLO County 1999, Table 3-2). Additionally, the Santa Margarita area and areas west of Nipomo are subject to a high number of smaller fires between 50 to 500 acres in size (SLO County 1999).

Cal Fire functions as the San Luis Obispo County Fire Department (SLOCFD) under a contract with the County of San Luis Obispo. The SLOCFD operates with approximately 180 full-time state employees, supplemented by up to 100 state seasonal firefighters, 300 county paid-call and reserve firefighters, and 120 state inmate firefighters. **Table 3.8-2** lists the fire stations for each planning area.

TABLE 3.8-2
FIRE STATIONS IN UNINCORPORATED SAN LUIS OBISPO COUNTY[1]

Carrizo Planning Area	North County Planning Area	San Luis Obispo Planning Area	South County Planning Area
Carrizo Plain Fire Station	Morro Toro Fire Station Paso Robles Fire Station Heritage Ranch Fire Station Oak Shores Fire Station Las Tablas Fire Station Parkhill Fire Station La Pansa Fire Station Creston Fire Station Shandon Fire Station Meridian Fire Station	San Luis Obispo Fire Station Airport Fire Station Avila Valley Fire Station	Nipomo Fire Station Mesa Fire Station

Source: SLO County 2014b

1. *Cambria Fire Station, Cayucos Fire Station, Los Osos Fire Station, Shell Beach Fire Station, and Pismo Beach Fire Department are located within the Coastal Zone so are not part of the RESP, although support from these fire departments may be provided to areas in the unincorporated county.*

Wildland Fire – Responsibility Areas and Protection

Within San Luis Obispo County, Cal Fire is responsible for wildland fire protection of almost 1.5 million acres. For the purposes of determining areas where wildland fires are likely to occur and determine fire protection responsibility for such areas, the following three definitions have been created and mapped for San Luis Obispo County. This definition is further defined in the California Public Resources Code (Sections 4126 and 4127).

- *Federal Responsibility Areas* (FRA) include lands owned by various federal agencies within the county. Examples of applicable federal agencies include Bureau of Land Management, US Forest Service, Camps San Luis and Roberts, and US Fish and Wildlife Service.

  To assist the federal government in supplementing or providing fire protection on its lands (in addition to its own fire protection services), it has established a cooperative agreement with Cal Fire (California Master Cooperative Wildland Fire Management and Stafford Act Response Agreement).

- *State Responsibility Areas* (SRA). As defined in Public Resources Code Sections 4126 and 4127, the potential wildland fire areas that are not within an FRA are either within a State Responsibility Area (SRA) or a Local Responsibility Area (LRA). To qualify as an SRA, the area typically has the following elements:

  – Lands covered by vegetation (e.g., trees, brush, grass)

  – Lands are used for forage, range, or wildlife habitat

  – Non-federal

  – Unincorporated

  While not uniformly applied, two exceptions would change the SRA to an LRA designation. These include irrigated cropland and areas with higher densities (greater

than 3 structures per acre) over larger areas. For the SRAs, primary wildland fire protection is provided by Cal Fire.

- *Local Responsibility Area* (LRA). As mentioned in the previous paragraph, LRAs have one or more of the following elements:
  - Incorporated cities
  - Unincorporated urbanized areas with a residential density of 3 or more houses per acre (in certain areas with high wildland fire potential, such areas are put into the SRA category)
  - Irrigated cropland areas (in certain areas with high wildland fire potential, such areas are put into the SRA category)

  Incorporated cities typically provide their own fire protection services. For unincorporated areas under this definition, municipal fire protection services are generally provided by Cal Fire through a contract with the County for such services.

At various permitting milestones, Cal Fire identifies project-specific elements to be addressed or included as part of the development. Ultimately, a Fire Safety Plan is typically required and then subsequently checked at the end of construction or improvements to make sure that all identified elements have been adequately addressed. For most areas, Interagency (Mutual Aid) Agreements exist, where nearby fire departments or districts from other jurisdictions will assist the fire agency that has primary responsibility for the subject property.

Expected response times for fire protection services vary with the degree of urbanization. Target response times for urban areas are up to 6 minutes, for suburban areas up to 7 minutes, and for rural areas up to 12 minutes. Response times exceeding 15 minutes for structure fires provide little possibility of saving the structure. An air tanker squadron at Paso Robles Airport is available if needed.

Urban fires are primarily those associated with structures and the activities in and around them. Most urban fires in the county are caused by human activity. Over the years, County development standards have become more stringent to reduce the frequency and severity of such events. Building codes now require firewalls for adjacent structures. Local ordinances often prohibit the use of fire-prone materials, such as shake-shingle roofs. Electrical standards have also changed to reduce fire risk inside structures. Smoke detectors are now commonly required.

In rural areas, the following measures are recommended or required of new structures: building exterior uses as much nonflammable material as possible; adequately sized water tanks to hold a certain amount of water for fire protection; vegetative fuel modification around structures and access roads; driveways having adequate widths for two-way traffic; adequate areas for fire vehicle turnarounds; highly visible addressing; and as applicable, secondary access.

3.8.2 REGULATORY SETTING

FEDERAL

Federal Aviation Administration

Federal Aviation Administration (FAA) regulations establish standards for determining obstructions in navigable airspace, including height limitations on structures taller than 200 feet or within 20,000 feet (approximately 3.8 miles) of an airport (14 Code of Federal Regulations [CFR], Part 77). The FAA requires that it be notified of these types of structures through the filing of

FAA Form 7460 1 (Notice of Proposed Construction or Alteration). Many wind turbines are taller than 200 feet and would trigger filing of FAA Form 7460 1.

Filing a Form 7460 1 allows the FAA to conduct an aeronautical study to ascertain whether the proposed structure would present a hazard to air navigation or could negatively impact the operational procedures of a nearby airport. The FAA then makes its recommendations, determining whether: (1) the proposed structure constitutes a hazard to air navigation; (2) the proposed structure would not constitute a hazard if the structure is marked and/or lit; or (3) the proposed structure is not a hazard even in the absence of marking or lighting.

The FAA also has an Interim Policy, FAA Review of Solar Energy System Projects on Federally Obligated Airports, which requires that a sponsor of a federally obligated airport must request FAA review and approval to depict certain proposed solar installations (e.g., ground-based installations and collocated installations that increase the footprint of the collocated building or structure) on its airport layout plan before construction begins.

STATE

California Environmental Protection Agency and State Water Resources Control Board

The California Environmental Protection Agency (Cal-EPA) and the State Water Resources Control Board (SWRCB) establish rules governing the use of hazardous materials and the management of hazardous waste. Applicable state and local laws include the following:

- Public Safety/Fire Regulations/Building Codes
- Hazardous Waste Control Law
- Hazardous Substances Information and Training Act
- Air Toxics Hot Spots and Emissions Inventory Law
- Underground Storage of Hazardous Substances Act
- Porter-Cologne Water Quality Control Act

Department of Toxic Substances Control

Within Cal-EPA, the Department of Toxic Substances Control has primary regulatory responsibility for the management of hazardous materials and the generation, transport, and disposal of hazardous waste under the authority of the Hazardous Waste Control Law. The DTSC often delegates enforcement to local jurisdictions that enter into agreements with the state agency. In addition, the DTSC is frequently involved with the cleanup of abandoned mine sites.

California Occupational Safety and Health Administration

The California Occupational Safety and Health Administration (Cal/OSHA) is the primary agency responsible for worker safety in the handling and use of chemicals in the workplace. Cal/OSHA standards are generally more stringent than federal regulations. The employer is required to monitor worker exposure to listed hazardous substances and notify workers of exposure (8 CCR Sections 337–340). The regulations specify requirements for employee training, availability of safety equipment, accident-prevention programs, and hazardous substance exposure warnings.

California Highway Patrol

A valid Hazardous Materials Transportation License, issued by the California Highway Patrol (CHP), is required by the laws and regulations of California Vehicle Code Section 3200.5 for transportation of either hazardous material shipments, for which the display of placards is required by state regulations, or hazardous material shipments of more than 500 pounds, which would require placards if shipping in greater amounts in the same manner.

The CHP enforces additional requirements on the transportation of explosives, inhalation hazards, and radioactive materials under the authority of the California Vehicle Code. Transportation of explosives generally requires consistency with additional rules and regulations for routing, safe stopping distances, and inspection stops (Title 14, CCR, Chapter 6, Article 1, Sections 1150–1152.10). Inhalation hazards face similarly more restrictive rules and regulations (Title 13, CCR, Chapter 6, Article 2.5, Sections 1157–1157.8). Radioactive materials are strictly restricted to specific safe routes for transportation of such materials.

Business Plan Act

The California Hazardous Materials Release Response Plans and Inventory Law (Business Plan Act) requires preparation of hazardous materials business plans and disclosure of hazardous materials inventories. A business plan includes an inventory of hazardous materials handled, facility floor plans showing where hazardous materials are stored, an emergency response plan, and provisions for employee training in safety and emergency response procedures (California Health and Safety Code, Division 20, Chapter 6.95, Article 1). Statewide, the DTSC has primary regulatory responsibility for management of hazardous materials, with delegation of authority to local jurisdictions that enter into agreements with the State.

Cal-EPA certified local agencies to implement and regulate the state environmental programs within the local agency's jurisdictions, called the Certified Unified Program Agency (CUPA). San Luis Obispo County is a CUPA and has a Hazardous Materials Business Plan Program Eligibility Flowchart used to identify whether a plan is required. The threshold for submitting a hazardous materials business plan is storing, using, or handling hazardous materials at any one time during a calendar year in quantities equal to or greater than 55 gallons of a liquid, 500 pounds of a solid, or 200 cubic feet of a compressed gas at standard temperature and pressure.

California Emergency Response Plan

California has developed an Emergency Response Plan to coordinate emergency services provided by federal, state, and local governments and private agencies. Response to hazardous materials incidents is one part of this plan. The plan is managed by the California Office of Emergency Services (OES), which coordinates the responses of other agencies including Cal-EPA, the California Highway Patrol, the California Department of Fish and Wildlife, the Regional Water Quality Control Board, and the San Luis Obispo County Sheriff's Department.

California Office of Emergency Services

In order to protect the public health and safety and the environment, the OES is responsible for establishing and managing statewide standards for business and area plans relating to the handling and release or threatened release of hazardous materials. Basic information on hazardous materials handled, used, stored, or disposed of (including location, type, quantity, and health risks) needs to be available to firefighters, public safety officers, and regulatory agencies. This information also needs to be included in business plans in order to prevent or

mitigate the damage to the health and safety of persons and the environment from the release or threatened release of these materials into the workplace and environment. These regulations are covered under Chapter 6.95 of the California Health and Safety Code Article 1–Hazardous Materials Release Response and Inventory Program (Sections 25500–25520) and Article 2–Hazardous Materials Management (Sections 25531–25543.3). CCR Title 19, Public Safety, Division 2, Office of Emergency Services, Chapter 4–Hazardous Material Release Reporting, Inventory, and Response Plans, Article 4 (Minimum Standards for Business Plans) establishes minimum statewide standards for hazardous materials business plans. These plans must include the following: (1) a hazardous material inventory in accordance with Sections 2729.2–2729.7; (2) emergency response plans and procedures in accordance with Section 2731; and (3) training program information in accordance with Section 2732. Business plans contain basic information on the location, type, quantity, and health risks of hazardous materials stored, used, or disposed of in the state. Each business must prepare a plan if that business uses, handles, or stores a hazardous material or an extremely hazardous material in quantities greater than or equal to the following: 500 pounds of a solid substance, 55 gallons of a liquid, 200 cubic feet of compressed gas, a hazardous compressed gas in any amount, or hazardous waste in any quantity.

Power Line Hazard Reduction (PRC 4292)

Public Resources Code (PRC) Section 4292 requires a 10-foot clearance around any tree branches or ground vegetation at the base of power poles carrying more than 110 kilovolts (kV). The firebreak clearances required by PRC Section 4292 are applicable within an imaginary cylindrical space surrounding each pole or tower on which a switch, fuse, transformer, or lightning arrester is attached as well as each dead-end or corner pole unless such pole or tower is exempt from minimum clearance requirements by provisions of PRC Section 4296.

Power Line Clearance Required (PRC 4293)

PRC Section 4293 provides guidelines for line clearance, including a minimum of 10 feet of vegetation clearance around any conductor operating at 110 kV or higher.

Minimum Clearance Provisions (14 CCR 1254)

With respect to minimum clearance requirements, 14 CCR 1254 presents guidelines pertaining to nonexempt utility poles. The firebreak clearances required by 14 CCR 1254 are applicable within an imaginary cylindrical space surrounding each pole or tower on which a switch, fuse, transformer, or lightning arrester is attached as well as each dead-end or corner pole unless such pole or tower is exempt from the minimum clearance requirements by the provisions of 14 CCR 1255 or PRC Section 4296. The radius of the cylindroid is 10 feet, which is measured horizontally from the outer circumference of the specified pole or tower, with the height equal to the distance from the intersection of the imaginary vertical exterior surface of the cylindroid to an intersection with a horizontal plane passing through the highest point at which a conductor is attached to such pole or tower. Flammable vegetation and materials located wholly or partially within the firebreak space would be treated as follows:

- At ground level: Remove flammable materials, including ground litter, duff, and dead or desiccated vegetation that would propagate fire.
- From 0 to 8 feet above ground level: Remove flammable trash, debris, or other materials, grass, and herbaceous and brush vegetation. All limbs and foliage of living trees would be removed up to a height of 8 feet.

- From 8 feet to the horizontal plane of the highest point at which a conductor is attached: Remove dead, diseased, or dying limbs and foliage from living, sound trees, and remove any dead, diseased, or dying trees in their entirety.

LOCAL

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

The Conservation and Open Space Element (COSE) (adopted in 2010) includes policies to address the risk posed by hazardous materials associated with energy generation, transportation, and storage. It requires that facilities associated with energy or fossil fuel activities be located, constructed, and operated in a manner that does not create a public hazard. The specific actions contained in the COSE include cleanup and restoration protocols for hydrocarbon spills, planning and permitting requirements for some types of energy and fossil fuel facilities, and siting standards for distribution and transmission infrastructure (including pipelines and electricity transmission lines). The COSE also contains policies to reduce the risk of wildfires and to reduce potential conflicts between fire protection needs and sensitive biological resources.

San Luis Obispo County General Plan – Safety Element

The Safety Element (adopted in 1999) contains policies that address the risks posed by hazardous materials. The greatest risk from hazardous materials in the county is from transportation-related accidents, due in large part to the quantity and frequency of hazardous material shipping through the area by means of road, railways, or pipelines. The Safety Element addresses a number of additional hazards relevant to this EIR section, including pesticides, radiation, airports, and naturally occurring sources of radon gas. Many of the policies concerning these hazards include proper hazardous materials training for law enforcement and first responders, educating residents about risks, and frequent monitoring and review of activities that may pose a threat.

San Luis Obispo County Land Use Ordinance – Title 22

The Land Use Ordinance (LUO) contains standards and policies addressing the threat posed by hazards and hazardous materials. These items include reducing the risk posed by geologic hazards, detailing the standards for safe storage and transportation of hazardous materials, and minimizing land use conflicts that may result in hazardous situations.

<u>LUO – Electric-Generating Plants</u>

The Electric Generating Plants section of the LUO (Title 22, Chapter 22.32) includes requirements pertaining to hazards and hazardous materials associated with electricity production. Steam electric generating facilities must provide details about the on-site use and disposal of all hazardous materials and submit a hazardous materials and waste management plan, as described in Title 22, Section 22.32.040. Wind energy conversion systems must include warnings of the risk of electric shock or high voltage, may not cause electromagnetic interference, and must include rotor safety controls, under the provisions of Title 22, Section 22.32.050.

San Luis Obispo County Airport Land Use Plans

There are three Airport Land Use Plans in San Luis Obispo County: the San Luis Obispo County Regional Airport Land Use Plan, the Paso Robles Municipal Airport Land Use Plan, and the Oceano County Airport Land Use Plan. These plans contain measures to ensure that the airports in the county are compatible with surrounding land uses and that the airports and surrounding land uses do not create a risk of hazards to each other.

Camp Roberts Joint Land Use Study

The Camp Roberts Joint Land Use Study (JLUS) is a plan to ensure compatibility between the Camp Roberts National Guard post and surrounding land uses. The strategies in the study seek to minimize potential land use conflicts, primarily by establishing protocols for notification and cooperation between stakeholders. The study does not by itself create additional permitting or development standards, although it does identify issues of potential conflict, such as tall structures near Camp Roberts' flight paths, that could be incorporated into the LUO or other local land use documents.

San Luis Obispo County Hazardous Waste Management Plan

The San Luis Obispo County Hazardous Materials Emergency Response Plan covers hazardous material emergencies associated with the transportation, storage, manufacture and processing, use, and disposal of hazardous materials, with the exception of nuclear emergencies occurring from operation of the Diablo Canyon Power Plant (see San Luis Obispo County/Cities Nuclear Power Emergency Response Plan, below). The plan defines the jurisdiction and responsibilities of local, state, and federal agencies in a hazardous waste emergency and the process for responding to a hazardous waste emergency.

San Luis Obispo County/Cities Nuclear Power Emergency Response Plan

The San Luis Obispo County/Cities Nuclear Power Emergency Response Plan addresses the emergency situation that may result from a release of radioactive material or production of radioactive material in excess of protective actions at the Diablo Canyon Power Plant. The plan outlines the responsible authorities in the event of a radiological emergency, describes the concepts associated with such an emergency, and details the appropriate response and operation procedures. The plan also acts as a component of the County's Emergency Operations Plan (EOP).

San Luis Obispo County Environmental Health Services

In conjunction with other regulatory and planning agencies, Environmental Health provides comments regarding project compliance with appropriate environmental health standards. Staff is responsible for signing off on construction permit conditions.

San Luis Obispo County Office of Emergency Services

The Office of Emergency Services administers the County's Emergency Operations Plan (EOP), which provides guidance, procedures, and County policies pertaining to emergency planning and response. The EOP provides support for the agencies that have the primary responsibility for responding to an emergency incident. The EOP primarily comprises five emergency plans: (1) Earthquake Response Plan; (2) Hazardous Materials Emergency Response Plan; (3) Dam

Failure Evacuation Plan; (4) Nuclear Power Plant Emergency Response Plan; and (5) Storm Emergency Plan.

Summary of Local Regulations and Policies

Table 3.8-3 summarizes regulations and policies from the documents described above, including strategies to avoid land use conflicts that may create an unsafe situation to the risk of exposure to hazardous or potentially hazardous materials and to ensure that buildings and circulation networks are designed to allow access by emergency responders if necessary. The table also identifies where policies or standards only apply to sub-areas or land use designations.

A number of standards that indirectly relate to hazard and hazardous materials may be found in other sections of this EIR.

TABLE 3.8-3
LOCAL POLICIES AND REGULATIONS FOR HAZARDS AND HAZARDOUS MATERIALS

Applicable Plan or Code Section	Summary
Countywide	
Conservation and Open Space Element, Implementation Strategy E 6.7.1	Minimize the risk of public exposure to hazardous materials from cogeneration facilities.
Conservation and Open Space Element, Policy BR 7.1	Site land uses so as to minimize conflicts between activities to reduce fire risk and sensitive biological resources.
Conservation and Open Space Element, Policy E 7.1	Locate, construct, and operate energy, fossil fuel, and related uses in a manner to protect the public from potential hazards and significant environmental impacts.
Safety Element, Implementation Measure S-65	Land uses at the end of active airport runways should be low density, preferably open space or agriculture.
Safety Element, Implementation Measure S-68	Ensure that projects which use, store, or transport hazardous materials take appropriate measures to protect public health and safety.
Safety Element, Implementation Measure S-72	Ensure that pesticide applicators take appropriate measures to protect public health and safety.
Title 16, Chapter 16.10	All developments shall comply with the 2010 California Fire Code and with County amendments pertaining to fire access roads and fire detection/suppression systems.
Title 19, Section 19.80.108.1.5	Buildings with unsafe features may be declared dangerous. Owners may be subject to repair or demolition costs if unsafe conditions are not fixed.
Title 22, Section 22.32.040.A.5	Applications for steam electric generating facilities must describe the toxic and/or hazardous materials to be used on-site, and the plans for controlling, storing, and disposing of these materials.
Title 22, Section 22.32.040.B	Steam electric generating facilities must submit a hazardous material and waste management plan before the delivery and use of any such materials on-site.
Title 22, Section 22.32.050.B.2	Wind energy conversion facilities must include manual and automatic controls to limit the rotational speed of the blade below the design limits of the rotor.

Applicable Plan or Code Section	Summary
Title 22, Section 22.32.050.B.5	All wind turbine towers must contain a sign at the base of the tower warning of high voltage or the risk of electric shock.
Title 22, Section 22.32.050.B.6	Wind energy conversion facilities may not cause disruptive electromagnetic interference.
Title 22, Section 22.50.030.A	All land use permit applications must include a fire safety plan, except for single-family dwellings on existing lots in urban areas with sufficient water flow, agricultural uses that do not involve primary buildings in rural areas, or as waived by the applicable fire safety agency.
Title 22, Section 22.50.030.B	All fire safety plans must describe the nearest fire hydrant or source of water, storage of potentially explosive or flammable material, and access or vegetation fuel (depending on project location).
Carrizo Planning Area	
No additional policies or standards for the Carrizo Planning Area.	
North County Planning Area	
Camp Roberts Joint Land Use Plan, Issue VO-1	Prohibit high man-made or natural structures within the Camp Roberts flight paths.
Paso Robles Municipal Airport Land Use Plan, Objective 4.6.1	Avoid the development of land uses and land use conditions which pose hazards to aircraft in flight.
Paso Robles Municipal Airport Land Use Plan, Policy S-5	In order to demonstrate consistency with the Airport Land Use Plan, other land use planning documents may not allow high-intensity or unusually hazardous land uses within the area under the Airport Land Use Plan's jurisdiction.
San Luis Obispo Planning Area	
San Luis Obispo County Regional Airport Land Use Plan, Objective 4.4.1	Minimize the risk to persons and property on the ground from potential aircraft accidents.
San Luis Obispo County Regional Airport Land Use Plan, Objective 4.5.1	Avoid the development of land uses and land use conditions which pose hazards to aircraft in flight.
San Luis Obispo County Regional Airport Land Use Plan, Policy S-4	San Luis Obispo area: High-intensity or unusually hazardous land uses are not allowed within the area under the Airport Land Use Plan's jurisdiction.
South County Planning Area	
Oceano County Airport Land Use Plan, Air Space Protection Policy Objective	Avoid the development of land uses and land use conditions which pose hazards to aircraft in flight.
San Luis Obispo County Regional Airport Land Use Plan, Objective 4.4.1	Minimize the risk to persons and property on the ground from potential aircraft accidents.
San Luis Obispo County Regional Airport Land Use Plan, Objective 4.5.1	Avoid the development of land uses and land use conditions which pose hazards to aircraft in flight.
San Luis Obispo County Regional Airport Land Use Plan, Policy S-4	South County area: High-intensity or unusually hazardous land uses are not allowed within the area under the Airport Land Use Plan's jurisdiction.

3.8.3 IMPACTS AND MITIGATION MEASURES

THRESHOLDS OF SIGNIFICANCE

A hazards and hazardous materials impact is considered significant if implementation of the RESP would result in any of the following:

1) Create a hazard to the public, workers or the environment through the routine transport, use, or disposal of hazardous materials.

2) Create a hazard to the public, workers or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment.

3) Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school.

4) Be located on, or adjacent to, a site which is included on a list of hazardous material/waste sites compiled pursuant to Government Code Section 65962.5 (Cortese List) and result in an adverse public health condition.

5) Impair implementation of or physically interfere with an adopted emergency response plan or evacuation plan.

6) If within the Airport Review designation or near a private airstrip, result in a safety hazard for people residing or working in the project area.

7) Increase fire hazard risk or expose people or structures to high wildland fire hazard conditions.

Two additional thresholds of significance (Be within a "very high" fire hazard severity zone; Be within an area classified as a "state responsibility" area as defined by Cal Fire) will be addressed as part of Threshold 7 and are not addressed as separate impacts.

PROJECT IMPACTS AND MITIGATION MEASURES

Create a Hazard to the Public or the Environment through the Routine Transport, Use, or Disposal of Hazardous Materials (Threshold 1)

Impact 3-8-1 – Construction Implementation of the proposed Program could create a hazard to the public through the routine transport, use, or disposal of hazardous materials during construction of solar or wind facilities. This impact is considered **less than significant (Class III)**.

The Program would include construction activities that could involve limited transport, use, and disposal of hazardous materials routinely associated with the operation and maintenance of heavy construction equipment or other support vehicles, such as gasoline fuels, asphalt, lubricants, toxic solvents, pesticides, dust palliatives, and herbicides. The use and handling of hazardous materials during construction activities would be required to occur in accordance with applicable federal, state, and local laws.

While the potential exists for these materials to be leaked or accidentally spilled onto the ground or into waterways during construction and create a hazard to the public or the environment, such spills would be anticipated to be minor based on the quantity of such materials typically stored and/or used on a construction site for Tier 1, Tier 2, and Tier 3 projects. If the project were to use or store larger quantities of hazardous materials, it would be subject to the existing San Luis Obispo CUPA hazardous materials business plan requirements, reducing the impact to less than significant.

A business plan includes an inventory of hazardous materials handled, facility floor plans showing where hazardous materials are stored, an emergency response plan, and provisions for employee training in safety and emergency response procedures (California Health and Safety Code, Division 20, Chapter 6.95, Article 1). Statewide, the DTSC has primary regulatory responsibility for management of hazardous materials, with delegation of authority to local jurisdictions that enter into agreements with the State.

Furthermore, all construction sites disturbing more than 50 cubic yards of material or removing more than 1 acre of vegetation would be subject to the County's grading permit requirements (Chapter 22.52 of the County Code), which establish standards to, among other things, prevent contaminants, sediments, and/or pollutants from leaving construction sites. The grading permit requirements set forth standards, including the incorporation of best management practices (BMPs) to control all grading, excavation, and earthwork and would ensure that hazardous or flammable materials used during construction of solar or wind facilities would not create a significant hazard to the public.

In addition, potential impacts related to minor spills would be largely avoided by training construction personnel in the handling and storage of hazardous materials in compliance with OSHA standards, which require construction projects to implement safe hazardous material handling and storage, transfer (e.g., refueling), and maintenance (e.g., oil changes, washing). Renewable energy projects would comply with these laws and guidelines to ensure personnel health and safety. Standard OSHA and Cal/OSHA-required safety training would be conducted prior to construction to educate personnel of potential safety issues.

These existing regulations would ensure that the transport, use, and disposal of hazardous materials during solar or wind facility construction activities would not create a significant hazard to the public or the environment. This impact would be **less than significant (Class III)**.

Impact 3-8-1 – Solar Implementation of the proposed Program could create a hazard to the public through the routine transport, use, or disposal of hazardous materials. This impact is considered **less than significant (Class III)**.

Cadmium telluride (CdTe) may be present in photovoltaic solar panels used for solar energy projects. CdTe is considered toxic if ingested or inhaled via dust particles. The semiconductor layer in cadium telluride (CdTe) photovoltaic (PV) modules is in the environmentally stable form of a compound rather than the leachable form of a metal. The module design results in the encapsulation of the semiconductor material between two sheets of glass, thereby preventing the exposure of CdTe to the environment. Human exposure to CdTe would occur only if a module, sealed in glass, generated flake or dust particles. The potential for CdTe release could only occur from severe pitting of the panel surface. In addition, some high-performance solar photovoltaic cells contain small amounts of selenium and arsenic, which could be emitted if solar cells were broken during construction or decommissioning.

For photovoltaic facilities using high-performance solar cells, special handling of solar panels containing toxic metals would be required to prevent accidental breakage that would also preclude recycling of the solar cell materials at off-site facilities. Any modules that are damaged/broken or found to be defective for any reason (during construction or operations) would be returned to the manufacturing facility for recycling, consistent with California (i.e., retrograde material) and federal requirements, where they would be recycled into new modules or for use in other new products.

As described in the proposed changes to Chapter 22.32, all renewable energy facilities land use permit applications will be required to submit a recycling and disposal plan that would address both construction and operations of the solar electric facility (SEF) project for renewable energy infrastructure, including photovoltaic panels, so that project structures do not pose a risk to human health or the environment. The recycling and disposal plan is required to specify how project components will be disposed of in a manner that will not pose a risk to human health or the environment.

SEF projects that deal with storage, use, and disposal of hazardous materials within all County planning areas would comply with all appropriate federal, state, and local regulations, such as the regulations discussed in Subsection 3.8.2, Regulatory Setting, to ensure safety of the surrounding public and environment. For instance, a business plan which includes an inventory of hazardous materials handled, facility floor plans showing where hazardous materials are stored, an emergency response plan, and provisions for employee training in safety and emergency response procedures (California Health and Safety Code, Division 20, Chapter 6.95, Article 1) would be required for each individual project. These requirements would reduce this impact to **less than significant (Class III)**.

Impact 3-8-1 – Wind

Implementation of the proposed Program could create a hazard to the public through the routine transport, use, or disposal of hazardous materials. This impact is considered **less than significant (Class III)**.

As with solar projects, wind energy projects would require use of small amounts of hazardous materials during construction and operations, which could result in spills or releases.

Construction and decommissioning of wind facilities would generate both solid and minor liquid wastes. Fluids used and drained from turbine drive train components (e.g., lubricating oils, hydraulic fluids, coolants) require disposal. Tower segments, turbine components (emptied of their fluids), and broken concrete would not pose a hazardous materials risk and could be recycled or reused. Miscellaneous materials without salvage value are expected to be nonhazardous and would be sent to permitted disposal facilities.

Because the RESP only streamlines Tier 1 wind energy projects, the amount of hazardous materials used, transported, or disposed of for these projects would be anticipated to be minor. Similarly, the amount of waste produced when decommissioning Tier 1 wind energy conversion systems (WECS) would be minor due to the size of rooftop wind projects. Similar to SEF projects, Tier 2 WECS projects would be required to comply with all appropriate federal, state, and local regulations, such as the regulations discussed in Subsection 3.8.2, Regulatory Setting, to ensure safety of the surrounding public and environment. Because of the size of Tier 1 WECS and the standard requirements for building all WECS projects, this impact would be **less than significant (Class III)**.

Impact 3-8-1 – Policy Changes Implementation of the proposed Program could result in changes to countywide policies that could indirectly create a hazard to the public through the routine transport, use, or disposal of hazardous materials. This impact is considered **less than significant (Class III)**.

Adherence to policy changes proposed under the RESP would ensure streamlined solar and wind projects comply with San Luis Obispo County ordinances and existing regulations. The performance standards contained in the RESP would ensure that projects implemented under the Program would result in **less than significant (Class III)** impacts as demonstrated above.

Create a Hazard to the Public or the Environment Through Reasonably Foreseeable Upset and Accident Conditions Involving the Release of Hazardous Materials into the Environment (Threshold 2)

Impact 3-8-2 – Solar Implementation of the proposed Program could create a hazard to the public through the reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment. This impact is considered **less than significant (Class III)**.

Tier 1, Tier 2, and Tier 3 SEF projects may be streamlined throughout the county within the Renewable Energy (RE) Combining Designation. During the construction phases of certain SEF projects, a hazard to the public or the environment could be created through the disturbance of contaminated property. According to the GeoTracker database (see **Table 3.8-1**), there are currently 39 cleanup sites in the county. 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.

Where appropriate, the County would require an investigation of the potential for SEF projects that are located at or in the vicinity of identified hazardous material sites or in areas that contain hazardous materials. Site-specific evaluation would have to include a historical assessment of past uses, and when determined appropriate by the County, soil sampling. In those instances where a specific project site is found to be contaminated by hazardous materials, the site would be required, where appropriate, to be cleaned up to the standards of the appropriate regulatory agency. Appropriate remediation measures to ensure worker safety during construction would be required, where appropriate, prior to the commencement of earth-moving activities, subject to the County's review and approval.

As previously described, SEF projects that deal with the storage, use, and disposal of hazardous materials within all County planning areas would comply with all appropriate federal, state, and local regulations, such as the regulations discussed in Subsection 3.8.2, Regulatory Setting, to ensure the safety of the surrounding public and environment.

Tier 1, 2, and 3 SEF projects could also occur in areas with the valley fever fungus (*Coccidioides immitis)*. Project construction would disturb the soil and cause the fungal spores to potentially become airborne, potentially putting construction personnel and wildlife at risk of contracting valley fever. As discussed in Section 3.3, Air Quality, infection from valley fever during construction can be avoided through the control of construction-generated dust. Construction-generated dust associated with the project would be controlled by adhering to the requirements contained in Section 22.52.160 of the County Code and would ensure that impacts associated with valley fever would be addressed**.** Additionally, other actions can be implemented by project contractors

during construction such as suspending work during period of high winds or dust storms, wetting the soil before disturbing it by heavy equipment or vehicles and wetting soils continuously while digging in order to keep dust levels down, providing vehicles with enclosed, air-conditioned cabs and making sure workers keep the windows closed and equipping cabs with high-efficiency particulate air (HEPA) filters, positioning workers upwind when digging a trench or performing other soil-disturbing tasks, and employing the use of NIOSH-approved respiratory protection with particulate filters rated as N95, N99, N100, P100, or HEPA when exposure to dust is unavoidable.

For these reasons, this impact is considered **less than significant (Class III)**.

Impact 3-8-2 – Wind Implementation of the proposed Program could create a hazard to the public through the reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment. This impact is considered **less than significant (Class III)**.

Construction and operation of Tier 1 WECS would be small in scale and located on existing roofs or structures. They would not result in ground disturbance to areas that may previously have been contaminated but may result in disturbance to roofing shingles that could contain asbestos. Prior to installation of a Tier 1 WECS, studies assessing the structure's roof would be required. Any roofing shingles with asbestos would be identified, and existing regulations, such as 8 CCR Section 339, would require that this hazardous material be addressed prior to any construction, reducing the impact to less than significant.

The transport of Tier 1 WECS would involve minimal hazardous materials and so would be unlikely to result in accidental release of such materials. Any risk of hazard to the public through the reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment would be considered **less than significant (Class III)**.

Impact 3-8-2 – Policy Changes Implementation of the proposed Program could create a hazard to the public through the reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment. This impact is considered **less than significant (Class III)**.

Adherence to existing regulations, as well as to policy changes proposed under the RESP, would ensure that solar and wind projects are required to comply with all appropriate federal, state, and local regulations, such as the regulations discussed in Subsection 3.8.2, Regulatory Setting, to ensure the safety of the surrounding public and environment. The Program would not indirectly create a hazard to the public through the accidental release of hazardous materials. This impact is considered **less than significant (Class III)**.

Emit Hazardous Emissions or Handle Hazardous or Acutely Hazardous Materials, Substances, or Waste Within One-Quarter Mile of an Existing or Proposed School (Threshold 3)

There are 34 elementary, middle, and high schools in San Luis Obispo County. Only one school, Carrisa Plains Elementary, is located in the Carrizo Planning Area. The North County Planning Area has a number of elementary, middle, and high schools, many of which are clustered in the Paso Robles, Templeton, and Atascadero areas. The San Luis Obispo Planning Area has a number of elementary, middle, and high schools, many of which are clustered in or near the city of San Luis Obispo. The South County Planning Area has a number of elementary, middle, and

high schools, many of which are in the western portion of the planning area and most of which are in or near Arroyo Grande. Some of the schools in these planning areas are within or near the RE Combining Designation.

Impact 3-8-3 – Solar Implementation of the proposed Program could result in emitting hazardous materials within one-quarter mile of an existing or proposed school. This impact is considered **less than significant (Class III)**.

Although the exact location of the Tier 1, 2, and 3 SEF projects are unknown, it is possible that some projects would be within one-quarter mile of an existing or proposed school. However, as described above, all renewable energy facilities would comply with all appropriate federal, state, and local regulations, such as the regulations discussed in Subsection 3.8.2, Regulatory Setting, to ensure the safety of the surrounding public and environment. For instance, a business plan which includes an inventory of hazardous materials handled, facility floor plans showing where hazardous materials are stored, an emergency response plan, and provisions for employee training in safety and emergency response procedures (California Health and Safety Code, Division 20, Chapter 6.95, Article 1) would be required for each individual project.

In terms of the potential hazards of CdTe, the CdTe contained in PV modules is in the environmentally stable form of a compound rather than the leachable form of a metal. The module design results in the encapsulation of the semiconductor material between two sheets of glass, thereby preventing the exposure of CdTe to the environment. Furthermore, any modules that are damaged/broken or found to be defective for any reason (during construction or operations) would be returned to the manufacturing facility for recycling, consistent with California (i.e., retrograde material) and federal requirements, where they would be recycled into new modules or for use in other new products.

As described in the proposed changes to Chapter 22.32, all renewable energy facilities land use permit applications will be required to submit a recycling and disposal plan that would address both construction and operations of the SEF project for renewable energy infrastructure, including photovoltaic panels, so that project structures do not pose a risk to human health or the environment. The recycling and disposal plan is required to specify how project components will be disposed of in a manner that will not pose a risk to human health or the environment. Therefore, the risk of emissions of acutely hazardous materials in the vicinity of a school would be less than significant.

Students at nearby schools could be significantly impacted if a spill of motor vehicle fuel or transformer fluid were to occur as a result of transportation of these materials to the site for project construction. However, all construction sites disturbing more than 50 cubic yards of material or removing more than 1 acre of vegetation would be subject to the County's grading permit requirements (Chapter 22.52 of the County Code), which establish standards to, among other things, prevent contaminants, sediments, and/or pollutants from leaving construction sites. The grading permit requirements set forth standards, including the incorporation of best management practices (BMPs) to control all grading, excavation, and earthwork and would ensure that hazardous or flammable materials used during construction of solar or wind facilities would not create a significant hazard to the public.

Potential impacts related to minor spills would be largely avoided by training construction personnel in the handling and storage of hazardous materials in compliance with OSHA standards, which require construction projects to implement safe hazardous material handling and storage, transfer (e.g., refueling), and maintenance (e.g., oil changes, washing).

Renewable energy projects would comply with these laws and guidelines to ensure personnel health and safety. Standard OSHA- and Cal/OSHA-required safety training would be conducted prior to construction to educate personnel of potential safety issues. In addition, the transport of large quantities of hazardous materials is strictly regulated by the CHP (California Vehicle Code Section 3200.5) and the hazardous materials used during project construction would be transported along regulated routes by a licensed transporter and would therefore not pose a significant hazard to students at schools. This impact is considered **less than significant (Class III)**.

Impact 3-8-3 – Wind Implementation of the proposed Program could result in emitting hazardous materials within one-quarter mile of an existing or proposed school. This impact is considered **less than significant (Class III)**.

Construction and operation of Tier 1 WECS could be located within one-quarter mile of existing and proposed schools. Tier 1 WECS would be small in scale and located on existing roofs or structures. Construction of Tier 1 WECS would emit minimal hazardous materials, given the size and type of roof-mounted structures. Any risk of emitting hazard materials within one-quarter mile of an existing or proposed school would be minimal and **less than significant (Class III)**.

Impact 3-8-3 – Policy Changes Implementation of the proposed Program could create a hazard to the public through the reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment. This impact is considered **less than significant (Class III)**.

Adherence to policy changes proposed under the RESP would ensure that solar and wind projects are required to comply with all appropriate federal, state, and local regulations, such as the regulations discussed in Subsection 3.8.2, Regulatory Setting, to ensure the safety of the surrounding public and environment. Any impacts would be reduced to **less than significant (Class III)** levels and so would not indirectly create a hazard to the public through the accidental release of hazardous materials.

Be Located on, or Adjacent to, a Site Which Is Included on a List of Hazardous Material/Waste Sites Compiled Pursuant to Government Code Section 65962.5 (Cortese List) and Result in an Adverse Public Health Condition (Threshold 4)

Impact 3-8-4 – Solar Implementation of the proposed Program could result in an adverse public health condition by being located on or adjacent to a site on the Cortese List. This impact is considered **less than significant (Class III)**.

The Cortese List includes hazardous waste facilities, contaminated drinking water wells, sites listed as having underground storage tank leaks that have discharged into surface water or groundwater, and other sites that have had a known migration of hazardous materials or waste (see **Table 3.8-1**). Many of the sites listed in **Table 3.8-1** are located in incorporated cities and would not be within the Combining Designation overlay.

However, while unlikely, some of the Tier 1, 2, or 3 SEF sites could be within or adjacent to overlay site identified on the Cortese List and could therefore result in potentially adverse public health conditions. Even so, these sites are well regulated per federal and state laws. Where appropriate, the County would require an investigation of the potential for SEF projects to be located at or in

the vicinity of identified hazardous material sites or to be located in areas that contain hazardous materials.

Any future development of solar projects built on sites that are on the Cortese List would be required to comply with all California, federal, and local laws and regulations intended to prevent adverse public health conditions associated with these sites. For instance, lands identified on the Cortese List could be required to be cleaned up to the standards of the appropriate regulatory agency before the site can be developed. Appropriate remediation measures to ensure worker safety during construction would be required, where appropriate, prior to the commencement of earthmoving activities, subject to the County's review and approval. Therefore, this impact is **less than significant (Class III)**.

Impact 3-8-4 – Wind Implementation of the proposed Program could result in an adverse public health condition by being located on or adjacent to a site on the Cortese List. This impact is considered **less than significant (Class III)**.

Construction and operation of Tier 1 WECS would be small in scale and located on existing roofs or structures. While it is unlikely that they would be located on a building that is on the Cortese List, any future development of WECS projects built on sites that are on the Cortese List would be required to comply with all California, federal, and local laws and regulations intended to prevent adverse public health conditions associated with these sites. For instance, lands identified on the Cortese List could be required to be cleaned up to the standards of the appropriate regulatory agency before the site can be developed.. Therefore, this impact is **less than significant (Class III).**

Impact 3-8-4 – Policy Changes Implementation of the proposed Program could result in an adverse public health condition by being located on or adjacent to a site on the Cortese List. This impact is considered **less than significant (Class III)**.

As discussed above, any development of SEF and WECS projects built on sites that are on the Cortese List would be required to comply with all California, federal, and local laws and regulations intended to prevent adverse public health conditions associated with these sites. Therefore, this impact is **less than significant (Class III)**.

Impair Implementation of or Physically Interfere with an Adopted Emergency Response Plan or Evacuation Plan (Threshold 5)

Impact 3-8-5 – Solar The proposed Program could impair implementation of or physically interfere with adopted emergency response plan or evacuation plan. This impact is considered **less than significant (Class III)**.

Response corridors and evacuation routes are roadways that would typically be used by response vehicles or the general public in an emergency situation. These roadways are generally arterials and other major roadways that offer sufficient width for emergency response vehicles. Tier 1, Tier 2, and Tier 3 SEFs would not impair the implementation of plans to access these routes or directly interfere with access to them. Any construction-related traffic generated during the construction of SEFs would be limited in both scope and duration. The projects would be required to identify responsibilities and coordinate emergency responses at the local level in the event of an emergency. Furthermore, the operation of SEFs would not result in a substantial

concentration of people in one area and therefore would not affect existing response plans. Therefore, this impact would be **less than significant (Class III)**.

Impact 3-8-5 – Wind The proposed Program could impair implementation of or physically interfere with adopted emergency response plan or evacuation plan. This impact is considered **less than significant (Class III)**.

Construction and operation of Tier 1 WECS would be small in scale and located on existing roofs or structures. It is unlikely that they would impair implementation of or physically interfere with an adopted emergency response plan or an evacuation plan. Any construction traffic generated during the construction of Tier 1 WECS would be short term in nature, would likely be one or two vehicles, and would not generate interference with an emergency response plan. Therefore, this impact is **less than significant (Class III)**.

Impact 3-8-5 – Policy Changes The proposed Program could impair implementation of or physically interfere with adopted emergency response plan or evacuation plan. This impact is considered **less than significant (Class III)**.

Policy changes proposed under the RESP would not affect response corridors and/or evacuation routes. **Less than significant (Class III)** impacts would occur.

If Within the Airport Review Designation or Near a Private Airstrip, Result in a Safety Hazard for People Residing or Working in the Project Area (Threshold 6)

It is inevitable that some SEF and WECS projects will be in or near an airport review designation or near a private airstrip.

Impact 3-8-6 – Solar The proposed Program could result in a safety hazard for people residing or working in the project area. This impact is considered **less than significant (Class III)**.

Tier 1, Tier 2, or Tier 3 SEFS could be built at adjacent to or near existing airports. Low-flying planes and helicopters could be subject to glare from the reflective surfaces of the solar PV glass panels during daylight hours. Because of the potential footprint of PV arrays, up to 160 acres for Tier 3 SEFs, pilots could potentially experience distracting flashes of reflected light while flying in the immediate vicinity of a solar project. Viewers of such glare instinctually divert their eyes from the source. The duration of exposure would be very short because the glare source would be stationary and the viewer (pilot) would be traveling at a high rate of speed. Glare that is bright enough to temporarily impair vision and cause viewers to look away also occurs from other objects in the built and natural environment (such as lakes, building windows, reflective surfaces on other roadway vehicles).

While such glare would be a new feature in the project area, PV installations at airports typically incorporate anti-reflective coatings in the panels to minimize the effects of glare on aeronautical operations. In addition, existing objectives would prohibit any development within the Paso Robles Municipal Airport and San Luis Obispo County Regional Airport which have conditions that pose hazards to aircraft in flight (see Paso Robles Municipal Airport Land Use Plan, Objective 4.6.1, and San Luis Obispo Municipal Airport Land Use Plan, Objective 4.5.1).

Paso Robles Municipal Airport Land Use Plan Policy S-5 and San Luis Obispo County Regional Airport Land Use Plan Policy S-4 would not allow high-intensity or unusually hazardous land uses within the area under the Airport Land Use Plan's jurisdiction. Further, the Federal Aviation Administration's interim policy would require FAA review of solar energy projects on federally obligated airports, and 14 CFR Part 77 would require notification of any structures within 20,000 feet of an airport. With implementation of the existing rules and regulations regarding airports and private airstrips, impacts that could result in a safety hazard for people residing or working in the project area would be **less than significant (Class III)**.

Impact 3-8-6 – Wind The proposed Program could result in a safety hazard for people residing or working in the project area. This impact is considered **less than significant (Class III)**.

Construction and operation of Tier 1 WECS would be small in scale and located on existing roofs or structures. The height restriction for Tier 1 WECS is 10 feet in areas designated for agriculture, rural, and public facilities land uses, and up to 15 feet in all other land use categories. Because the Tier 1 WECS would be built on existing structures and would be limited in height, impacts within or adjacent to airport and private airstrips would be **less than significant (Class III)**. Additionally, Paso Robles Municipal Airport Land Use Plan Policy S-5 and San Luis Obispo County Regional Airport Land Use Plan Policy S-4 would not allow high-intensity or unusually hazardous land uses within the area under the Airport Land Use Plan's jurisdiction.

Impact 3-8-6 – Policy Changes The proposed Program could result in a safety hazard for people residing or working in the project area. This impact is considered **less than significant (Class III)**.

Adherence to existing policies and other policy changes proposed under the RESP would ensure streamlined solar and wind projects comply with San Luis Obispo County ordinances and applicable General Plan strategies, measures, and policies, including those in the Conservation and Open Space Element. This impact would be **less than significant (Class III)**.

Increase Fire Hazard Risk or Expose People or Structures to High Wildland Fire Hazard Conditions (Threshold 7)

Much of the area within the RE Combining Designation overlays are within Cal Fire State Responsibility Areas (SRA). Within these SRAs Fire Hazard Severity Zones include moderate, high, or very high risk areas. The Combining Designation overlays include 99,604 acres of moderate Fire Hazard Severity Zones within the Combining Designation overlays, 451,067 acres of high Fire Hazard Severity Zones, and 201,553 acres of very high Fire Hazard Severity Zones.

Impact 3-8-7 – Solar Implementation of the proposed Program could increase fire hazard risk or expose people or structures to high wildland fire hazard conditions. This impact is considered **less than significant (Class III)**.

Tier 1, Tier 2, and Tier 3 SEFS could potentially cause a wildfire hazard by igniting a wildfire during construction, operation, or maintenance or by interfering with firefighting operations. This is especially the case in areas that are identified by Cal Fire as high or very high Fire Hazard Severity Zones.

Project construction would involve the use of heavy equipment, welding, and other activities, including personnel smoking, which could cause a wildfire ignition at the site, potentially resulting in a hazard to personnel or to the scattered residences in the vicinity of the solar energy project. In addition, electrical fires from equipment during the operations phase of the project could ignite nearby vegetation. Switching equipment and inverters would be sited on concrete foundations, and inverters would be housed in steel and concrete equipment enclosures, minimizing the risk of electrical sparks that could ignite vegetation during equipment failure. All electrical equipment would be built to industry safety design standards, further reducing the risk of electrical fires at the site. PV array wiring may remain "hot," i.e., carry an electrical charge, after being disconnected during daylight hours. If PV panels are disconnected by trespassers, operations personnel, or during dismantling, live wires could result in a wildfire ignition if they were to come into contact with vegetation. In addition, live wires could pose an electric shock hazard to trespassers or authorized personnel.

Although the characteristics of the Tier 1, Tier 2, and Tier 3 SEF projects present only a moderate fire hazard, during extreme weather conditions, a fire originating at the solar sites could spread out of control and pose a risk to life and property within the RE Combining Designation overlays. Any loss of life or property as a result of an accidental wildfire ignition would be a significant impact. The risk of ignition from project activities could be reduced or eliminated by implementing additional fire safety practices during construction and site operation as required by County Code Chapter 22.50, Fire Safety Plan. Fire safety plans generally are reviewed by the County fire protection agency and include measures to prevent accidental ignition at the site. In addition, LUO Section 22.32.040.A.6 would require electrical safety signage on all arrays in the immediate vicinity of all wiring and all electrical conduits to reduce the risk of electrical shock and fire. Through implementation of these standards and policies, impacts related to wildfire would be **less than significant (Class III)**.

Impact 3-8-7 – Wind Implementation of the proposed Program could increase fire hazard risk or expose people or structures to high wildland fire hazard conditions. This impact is considered **less than significant (Class III)**.

Tier 1 WECS could be located within moderate, high, and very high Fire Hazard Severity Zones. Construction of Tier 1 WECS would be minor and confined to existing structures. The WECS would be required to abide by industry standards, and the risk of increasing wildfire risk is **less than significant (Class III).**

Impact 3-8-7 – Policy Changes The proposed Program could result in a safety hazard for people residing or working in the project area. This impact is considered **less than significant (Class III)**.

Adherence to existing policies and other policy changes proposed under the RESP would ensure streamlined solar and wind projects comply with San Luis Obispo County ordinances and applicable General Plan strategies, measures, and policies, including those in the COSE. This impact would be **less than significant (Class III)**.

CUMULATIVE IMPACTS

Hazardous material impacts are generally site-specific and not cumulative by nature, as impacts generally vary by land use, site characteristics, and site history. This is because hazardous materials and associated spills are located within the project site themselves or would occur during transportation to and from the site.

Tier 1, Tier 2, and Tier 3 SEF projects streamlined by the Program would primarily generate risk of hazardous upset or other hazardous material impacts during construction, with minimal risk of off-site upset of hazardous materials extending beyond the project site boundary during operation, as discussed above. In order for impacts due to hazards and hazardous materials from renewable energy projects streamlined by the RESP to combine with impacts of hazardous materials from other projects, the impacts would need to occur within a short time frame of each other and adjacent to each other.

For example, a hazardous materials spill from a Tier 1, Tier 2, or Tier 3 SEF project would only result in a cumulative impact if another project had a hazardous material spill at the same time in close proximity. Simultaneous hazardous spills are unlikely. Furthermore, the hazardous materials are heavily regulated at the federal, state, and local levels, and all renewable energy facilities subject to a discretionary permit will be required to submit a recycling and disposal plan that would address both construction and operations of the SEF project for renewable energy infrastructure so that project structures do not pose a risk to human health or the environment.

The proposed recycling and disposal plan is required to specify how project components would be disposed of in a manner that would not pose a risk to human health or the environment. In addition, a business plan that includes an inventory of hazardous materials handled, facility floor plans showing where hazardous materials are stored, an emergency response plan, and provisions for employee training in safety and emergency response procedures (California Health and Safety Code, Division 20, Chapter 6.95, Article 1) would be required. Therefore, this impact is less than cumulatively considerable.

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3.9 Land Use and Planning

This section evaluates land use and planning impacts that could result from implementation of the proposed Program. Key issues addressed in this section include potential conflicts with land use plans and policies and the potential for incompatibilities between land uses. Refer to Section 3.2, Agricultural Resources, for a detailed discussion regarding potential impacts to agricultural land uses.

3.9.1 PHYSICAL 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 land designated mostly Agriculture and Open Space. Incorporated cities include Paso Robles, Atascadero, San Luis Obispo, Grover Beach, Arroyo Grande, Morro Bay, and Pismo Beach. Unincorporated communities include San Miguel, Creston, Santa Margarita, Los Osos, San Simeon, Cambria, Cayucos, Pozo, Heritage Ranch, Oak Shores, Oceano, Nipomo, California Valley, Los Berros, Whitley Gardens, Palo Mesa, Woodlands, Avila Beach, Callendar-Garrett, and Shandon. Most urban areas are connected to Highways 1 and 101, which are the primary transportation corridors serving the Central Coast.

PLANNING AREAS

The County General Plan divides the unincorporated county into inland and coastal planning areas, with coastal areas consisting of those areas in the Coastal Zone. The Coastal Zone is not affected by the proposed project and is therefore not included in this analysis. The project area includes only the county's four inland planning areas: Carrizo, North County, San Luis Obispo County, and South County. Area plans establish policies specific to each planning area. **Table 3.9-1** indicates the acreages of land use categories in the four planning areas affected by the proposed project.

TABLE 3.9-1
LAND USE DESIGNATIONS BY PLANNING AREA (ACRES)

Land Use Category	Planning Area				
	Carrizo	San Luis Obispo	North County	South County	Total
Agricultural and Rural Categories					
Agriculture	264,977	43,236	737,863	227,102	1,273,179
Rural Lands	71,634	16,785	109,886	93,452	291,757
Residential Categories					
Residential Rural	0	2,587	24,700	14,480	41,767
Residential Suburban	20,239	1,885	7,501	6,835	36,460
Residential Single-Family	0	84	2,728	1,261	4,073
Residential Multi-Family	0	3	246	368	616
Commercial and Industrial Categories					
Office Professional	0	0	96	39	135
Commercial Retail	14	54	393	206	667
Commercial Service	0	184	322	183	688
Industrial	0	124	280	84	487
Special Purpose Categories					
Open Space	5,851	871	109,259	94,880	210,861
Recreation	8	6,767	4,643	5,811	17,229
Public Facilities	163	4,207	25,888	345	30,604
Total Acres	**362,886**	**76,786**	**1,023,804**	**445,045**	**1,908,523**

Source: SLO County 2013
Note: Acreage totals exclude land in the Coastal Zone.

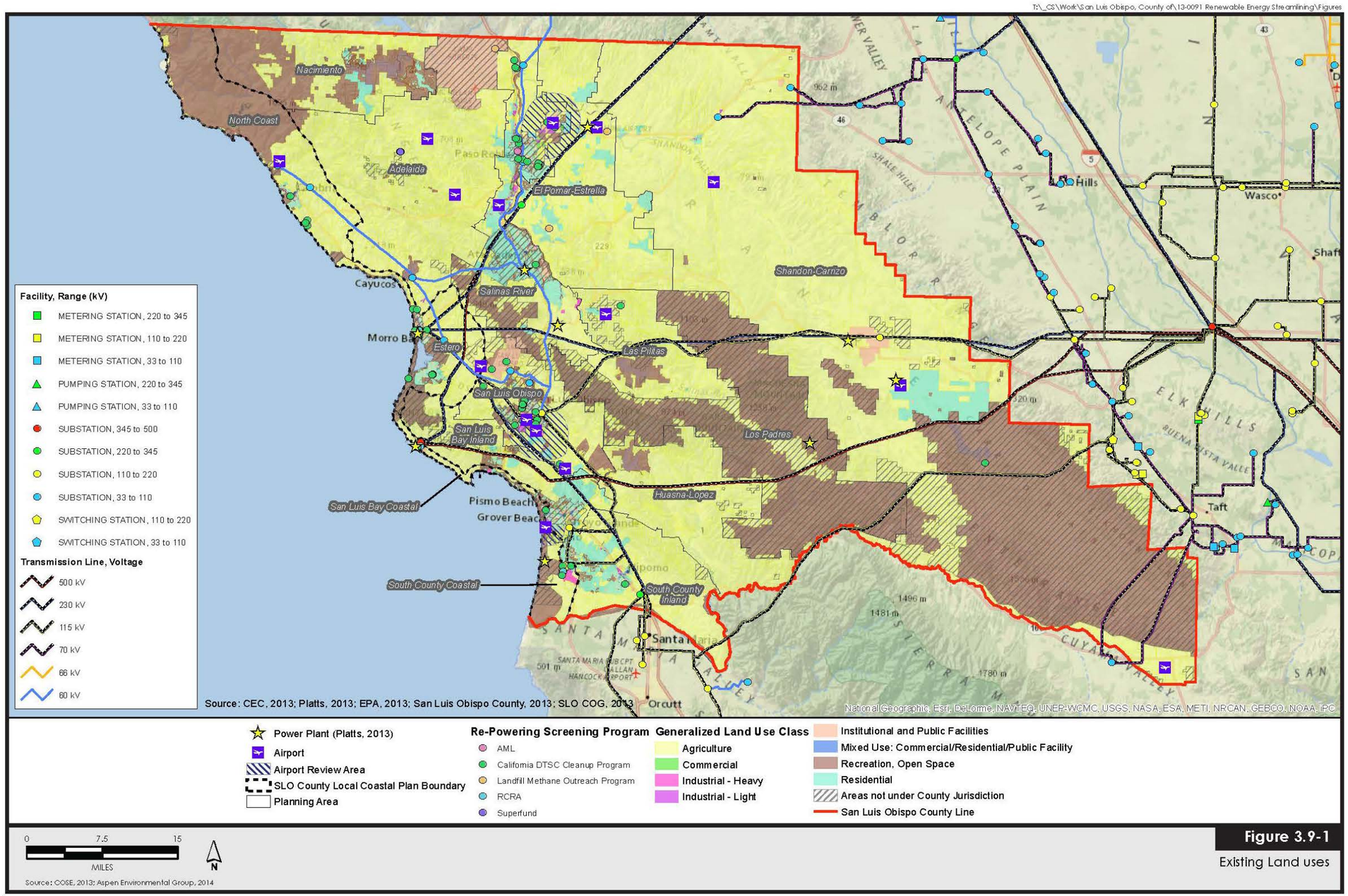

Figure 3.9-1
Existing Land uses

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Carrizo Planning Area

Located in the southeastern portion of the county, this largely rural and open space area is devoted almost exclusively to the agricultural uses of dry farming and rangeland. Most of the population in the Carrizo Planning Area is located in its one village area, California Valley, with a population of 356 (SLO County 2014b).

North County Planning Area

Approximately 95 percent of the North County Planning Area is designated Agriculture, Rural Lands, and Open Space. Much of the new development is increasingly oriented to commuter and retirement living, light industry, service businesses, and tourism in the area around the cities of El Paso de Robles (Paso Robles) and Atascadero (SLO County 2014b).

San Luis Obispo Planning Area

Located in the central western portion of the county and inland from the Coastal Zone, the San Luis Obispo Planning Area includes a compact urban center around the city of San Luis Obispo, surrounded by open agricultural lands (SLO County 2014b).

South County Planning Area

The South County Planning Area generally consists of the land south and east of San Luis Obispo to the Santa Barbara county line, between the Coastal Zone and the Carrizo Plain. Land uses in this large area are diverse, ranging from urban and suburban development in the incorporated cities and older town sites to rural residential and agricultural uses in the foothill and Nipomo Mesa areas, and the scenic and natural characteristics of the coastal ridges and the Los Padres National Forest (SLO County 2014b).

3.9.2 REGULATORY SETTING

STATE

Government Code Section 65300–65302 – General Plan and Land Use Element

California Government Code requires each city and county to adopt a comprehensive, long-term general plan to guide the physical development of the jurisdiction (Government Code Section 65300). The general plan includes a land use element to address the distribution and location of land uses, such as the built environment, open space, and agricultural uses. The land use element must include standards for population density and building intensity for land use districts identified in the element (Government Code Section 65302(a)).

LOCAL

San Luis Obispo County General Plan – Land Use and Circulation Element Part I: Framework for Planning

San Luis Obispo County's General Plan includes countywide elements that are supported with plans specific to each of the county's four inland planning areas. The Land Use and Circulation Element (LUCE) is a multipart element regulating land use. The LUCE provides countywide policies in Part I, the Framework for Planning – Inland. LUCE Parts II and III provide targeted

policies and standards for particular planning areas, including community and village plans. One of the County's primary principles is to preserve and protect natural, scenic, and agricultural resources. The General Plan states that the County hopes to strategically focus future growth away from rural areas and limited resources, closer to existing and planned job centers and public facilities where sustainable resources are available. Policies also seek to encourage and prioritize renewable energy in appropriate areas. This element also identifies nine combining designations (CD) that identify area with characteristics that are either of public value or are hazardous to the public. The special location, terrain, man-made features, plants, or animals of these areas create a need for more careful project review to protect those characteristics or to protect public health, safety, and welfare. Combining designations are established to achieve the following:

1) To relate intensity of development to the sensitivity of natural resources or other environmental features to minimize adverse environmental impacts.

2) To preserve the natural beauty and topography of the county by encouraging intensive development only where appropriate with regard to those natural features.

3) To promote preservation of the historic character of the county and to ensure that new development in historic areas is compatible with historic preservation.

4) To reduce risks to life and property through proper location and design of structures within areas subject to man-made or natural hazards, such as airports, flooding, or geologic hazards, including active faulting, landsliding, or liquefaction.

5) To inform developers, owners, and prospective buyers of property about potential flood or geologic hazards, supporting reduction of future demands for publicly funded flood control, landslide stabilization, and emergency aid.

6) To enhance property values and increase economic benefits to the county by promoting the tourist trade and interest in the historic, scenic and environmental amenities of the county.

7) To recognize the importance of continuing availability of mineral and energy resources by avoiding land use decisions which may inhibit the continuing viability of energy and extractive operations and result in unnecessary or premature termination of the use of such resources.

8) To recognize the importance of protecting agricultural land for agricultural uses (including the production of food and fiber) in the application of the combining designations and the siting of development.

The LUE uses the following nine combining designations:

AR (Airport Review): Applied to areas identified in the various county airport land use plans where proposed developments receive special review (to avoid land uses incompatible with airport operations), as well as areas within airport approach and departure patterns.

GSA (Geologic Study Area): Applied to areas identified in the Alquist-Priolo Geologic Hazard Zones Act as "Special Studies Zone" (Public Resources Code Section 2622), to areas within urban and village reserve lines subject to "moderately high to high" landslide risk or liquefaction

potential (as identified in the Safety Element of the County General Plan), and to lands outside urban reserve lines subject to high landslide risk potential (also according to the Safety Element).

FH (Flood Hazard): Applied to flood-prone areas identified through review of available data from various federal, state, or local agencies. Also includes flood elevations of existing lakes and reservoirs.

H (Historic Site): Applied to areas of unique historical significance.

SRA (Sensitive Resource Area): Applied to areas having high environmental quality and special ecological or educational significance.

LCP (Local Coastal Program): Applied to areas subject to the California Coastal Act of 1976.

EX (Energy or Extractive Area): Applied to areas where oil, gas, or mineral extraction occurs, is proposed, or where the State Geologist has identified petroleum or mineral reserves of statewide significance, and areas of existing or proposed energy-producing facilities.

EX1 (Extractive Resource Area): Applied to areas, including active mines, which the California Department of Conservation's Division of Mines and Geology has classified as containing or being highly likely to contain significant mineral deposits. Any such areas which are subsequently formally designated by the State as containing mineral deposits of statewide significance should be included in the EX combining designation subject to an amendment of the Land Use Element [Amended 1991, Ord. 2498].

TDCS (Transfer of Development Credits Sending Site): Applied to areas where a landowner has met the criteria and standards of the Land Use Ordinance for TDC Sending Sites and has entered into an easement that qualifies under either the Open Space Easement Act or the Conservation Easement Act granted to a qualified public or private nonprofit organization created for the purposes of protecting and managing resources, that restricts the development potential of the property. May also apply to community-based TDC programs (as set forth in Chapter 6 of Framework for Planning) identified through an area or community/village plan update or by request of the area property owners. [Added 1996, Ord. 2776]

TDCR (Transfer of Development Credits Receiving Site): Applied to areas where a landowner has met the criteria and standards of the Land Use Ordinance for TDC Receiving Sites and where a tentative map requiring the use of TDCs has been approved and recorded. May also apply to community-based TDC programs (as set forth in Chapter 6 of Framework for Planning) identified through an area or community/village plan update or by request of the area property owners. [Added 1996, Ord. 2776]

San Luis Obispo County General Plan – Land Use and Circulation Elements Part II and III: Area Plans and Community/Village Plans

Parts II and III of the LUCE address planning areas and sub-areas in the overall county. These area or community/village plans are adopted as part of the LUCE, while standards are adopted as part of the applicable Land Use Ordinance for that area (Title 22). Area and community/village plans in the LUCE include detailed descriptions of the County's planning areas, specific programs, and associated planning area 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 more detailed review when necessary for environmental issues such as sensitive habitats or flood hazards.

San Luis Obispo County General Plan – Other Elements

The County's eight General Plan elements establish policies to protect resources, balance competing land use priorities, and maintain distinct urban and rural communities. Policies also direct the County to encourage and promote renewable energy. The Conservation and Open Space Element (COSE) encourages solar electric facilities, especially in remote areas located away from utilities with specialized energy needs. COSE policies also support distributed generation renewable energy production. Policy E 6.8 directly calls for the protection of areas for renewable energy: "Designate and protect areas that contain renewable energy resources such as wind, solar, geothermal, and small hydroelectric."

While the General Plan supports renewable energy, select policies and implementation strategies also present priorities for other types of land uses. Such policies may pose indirect limitations to developing renewable energy on sites where certain conditions or resources are present. For example, both the Conservation and Open Space Element and the Agriculture Element identify the County's commitment to protect open space and agriculture resources by directing new development away from these resources. Conservation and Open Space Element Policy OS 1.7 states that the County will "protect open space resources by guiding development away from rural areas to more suitable areas." Similarly, policies in the Agriculture Element direct the County to "locate new buildings, access roads, and structures so as to protect agricultural land" (Policy AGP18) and "discourage the conversion of agricultural lands to non-agricultural uses" (Policy AGP 24). These example policies show that the General Plan's promotion of renewable energy is balanced with other environmental objectives.

San Luis Obispo County Land Use Ordinance

The County's Land Use Ordinance (LUO) provides the implementation framework for the County's General Plan. The LUO establishes which uses are allowed in each land use category and regulates site design and development within the land use categories.

The County's LUO is divided into two geographically based components—Inland (Title 22) and Coastal Zone (Title 23). The Renewable Energy Streamlining Program (RESP or Program) will apply to the inland area only.

Each land use designation specifies what uses are allowed within the designation. Many uses are allowed in more than one category. Land use designations are presented in **Figure 3.9-1.** A new land use or development may be allowed within a particular land use category if it is listed as an allowable or "special" use in Article 2 of the Land Use Ordinance (Title 22 of the San Luis Obispo County Code; Allowable Land Uses and Permit Requirements).

Chapter 22.42 of Title 22 (Combining Designation Standards) creates additional land use designations that function as overlays. Combining designations identify areas with characteristics that either are of public value or are hazardous to the public. The combining designations are described in Framework for Planning, Part I of the Land Use Element, as supplemental categories used on the official maps to identify areas where special characteristics, resources, or hazards to the public necessitate review of proposed land uses to evaluate their compatibility with those characteristics, resources, or hazards. Combining designations in the LUO Title 22 coincide with and implement the combining designations described in the LUCE of the General Plan.

Additional standards and permit requirements for combining designations are included in Chapter 22.42. Further limitations on uses may be imposed by standards in Articles 9 and 10 of the Land Use Ordinance. **Table 3.9-2** shows the land use categories in Title 22 that currently allow development of electric-generating plants.

TABLE 3.9-2
LAND USE CATEGORIES AND ALLOWANCES FOR ELECTRIC-GENERATING PLANTS

Use Group	Land Use Category												
	Agriculture	Rural Lands	Recreation	Residential Rural	Residential Suburban	Residential Single-Family	Residential Multi-Family	Office & Professional	Commercial Retail	Commercial Service	Industrial	Public Facilities	Open Space
Electricity Generation, except WECF,* Inland Planning Areas	A2	A2	A2	A2	—	—	—	—	—	A2	A2	A2	A2
Electricity Generation, WECF,* Inland Planning Areas	MUP	MUP	—	MUP	—	—	—	—	—	MUP	MUP	MUP	MUP

Source: SLO County 2014b
**"Wind Energy Conservation Facilities" (WECF) means any device which converts wind energy to a form of usable energy. WECF producing electricity are included here; those used for direct climate control, water pumping, or other conversion to mechanical or thermal power are included under "Agricultural Accessory Structures." Transmission lines located off the site of the power plant are included under "Pipelines and Transmission Lines." Electrical substations are included under "Public Utility Facilities."*
A2 = Allowable use, subject to the land use permit required by the specific use standards. Procedures are in the Land Use Ordinance, Section 22.32.
MUP = Conditional use – Minor Use Permit required. Procedure is in Land Use Ordinance, Section 22.62.050.

LUO– Standards for Land Uses and Electricity-Generating Uses

General property development standards for all land uses in the unincorporated county are established in Article 3 of Title 22 (Site Planning and General Project Design Standards). This article provides standards such as general setbacks and height limits. LUO Chapter 22.32 establishes standards for electricity-generating land uses. Standards address steam electric generating facilities, wind energy conversion facilities, photovoltaic generating facilities, hydroelectric generating facilities, and cogeneration facilities. Performance standards govern project siting and other considerations by technology type. Chapter 22.32 requires electricity-generating uses to prepare an environmental quality assurance program addressing all construction and operation aspects of the project.

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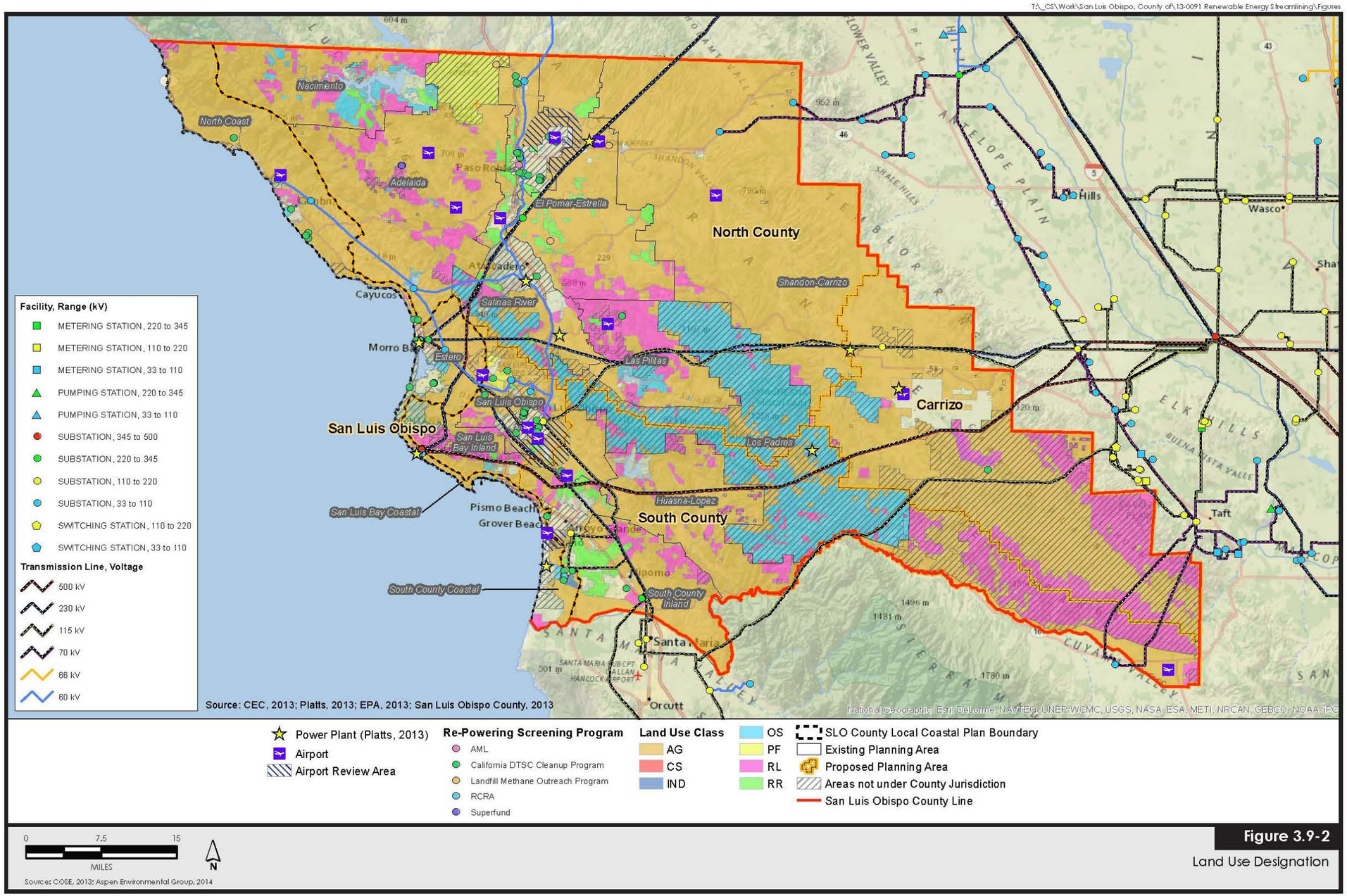

Figure 3.9-2
Land Use Designation

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LUO – Planning and Community Area Standards

Articles 9 and 10 of the LUO provide regulations for project siting and design that apply by area, community, or neighborhood. While Article 8 establishes countywide allowed uses by land use designation, Articles 9 and 10 provide additional limitations on use that preclude electricity generation in specified areas. **Table 3.9-3** indicates area and community plans where, according to Title 22, Articles 9 and 10, electricity generation is not allowable in certain land use categories and areas in which that use would otherwise be allowable according to Article 8.

TABLE 3.9-3
RESTRICTIONS ON ELECTRICITY GENERATION IN OTHERWISE ALLOWABLE USE AREAS

Planning Area	Section	Reference	Program or Standard
Carrizo Planning Area			
No additional standards that restrict electricity generation.			
North County Planning Area			
Heritage Ranch Village	Title 22, Article 10	22.104.030.C	Open Space (OS) land use designations: Does not allow electricity generation, which would otherwise be an allowable use (allows public utility facilities and pipelines & transmission lines).
Heritage Ranch Village	Title 22, Article 10	22.104.030.E	Residential Rural (RR) land use designations: Does not allow electricity generation, which would otherwise be an allowable use (also does not allow public utility facilities and pipelines & transmission lines).
Shandon sub-area, State Route 46 between Shandon and Cholame	Title 22, Article 9	22.94.090.C.1	Commercial Service (CS): Does not allow electricity generation, which would otherwise be an allowable use (also does not allow pipelines & transmission lines, public utility facilities).
Shandon sub-area, West Centre and State Route 46	Title 22, Article 9	22.94.090.C.2	Commercial Service (CS): Does not allow electricity generation, which would otherwise be an allowable use (also does not allow pipelines & transmission lines, public utility facilities).
Salinas River sub-area, industrial uses in Wellsona Road area	Title 22, Article 9	22.94.082.E	Industrial (IND): Does not allow electricity generation, which would otherwise be an allowable use (also does not allow pipelines & transmission lines, public utility facilities).
Salinas River sub-area, Spanish Camp area and Almira Park area	Title 22, Article 9	22.94.082.G	Residential Rural (RR): Does not allow electricity generation, which would otherwise be an allowable use (also does not allow pipelines & transmission lines, public utility facilities).
Salinas River sub-area, Wellsona Road area and other commercial service properties	Title 22, Article 9	22.94.082.C-E	Commercial Retail (CS): Does not allow electricity generation, which would otherwise be an allowable use (also does not allow pipelines & transmission lines, public utility facilities).
Oak Shores Village	Title 22, Article 10	22.104.040.C	Open Space (OS) land use designations: Does not allow electricity generation, which would otherwise be an allowable use (also does not allow pipelines & transmission lines).

Planning Area	Section	Reference	Program or Standard
San Miguel Community	Title 22, Article 10	22.104.060.D	Industrial (IND) land use designations: Does not allow electricity generation, which would otherwise be an allowable use (also does not allow public utility facilities or pipelines & transmission lines).
San Miguel Community, N Street – Adjacent to RMF	Title 22, Article 10	22.104.060.C	Commercial Service (CS) land use designation: Does not allow electricity generation, which would otherwise be an allowable use (also does not allow public utility facilities or pipelines & transmission lines).
San Luis Obispo Planning Area			
Edna and Buckley Roads	Title 22, Article 9	22.96.050.C	Industrial (IND): Does not allow electricity generation, which would otherwise be an allowable use (also does not allow pipelines & transmission lines, public utility facilities).
Irish Hills	Title 22, Article 9	22.96.050.B.1	Rural Lands (RL): Does not allow electricity generation, which would otherwise be an allowable use (also does not allow pipelines & transmission lines, public utility facilities).
O'Connor Way/West Foothill area	Title 22, Article 9	22.96.050.E.2	Residential Rural (RR): Does not allow electricity generation, which would otherwise be an allowable use (also does not allow pipelines & transmission lines, public utility facilities).
San Luis urban area	Title 22, Article 9	22.96.060, Allowable Land Uses and Permit Requirements	San Luis Obispo Urban Area: Does not allow electricity generation, which would otherwise be an allowable use. (allows pipelines & transmission lines but does not allow public utility facilities).
West of Bear Valley Estates (Tract 502)	Title 22, Article 9	22.96.050.E.3	Residential Rural (RR): Does not allow electricity generation, which would otherwise be an allowable use (also does not allow pipelines & transmission lines, public utility facilities).
South County Planning Area			
San Luis Bay (south) sub-area, Tiffany Rancho Road area and Northwest of Tiffany Ranch Road area	Title 22, Article 9	22.98.062.B	Residential Rural (RR): Does not allow electricity generation, which would otherwise be an allowable use (also does not allow pipelines & transmission lines, public utility facilities).
South County sub-area, Nipomo Mesa and Santa Maria (Oso Flaco) Valleys	Title 22, Article 9	22.98.072.A.1	Agriculture (AG): Does not allow electricity generation, which would otherwise be an allowable use (also does not allow pipelines & transmission lines, public utility facilities).
South County sub-area, northwest corner of Willow and Via Concha	Title 22, Article 9	22.98.072.F	Public Facilities (PF) land use designations: Does not allow for electricity generation, which would otherwise be an allowable use (also does not allow pipelines & transmissions lines or public utility facilities).

San Luis Obispo County Specific Plans

Specific plans for the unincorporated area provide additional land use goals, policies, and standards for the unincorporated area. Policies and standards provide prohibitions that further

limit electricity generation in designated communities. The County's inland specific plans include:

- Lake Nacimiento Resort Specific Plan (1976)
- Black Lake Specific Plan (1998)
- Los Ranchos Edna Village Specific Plan (2001)
- Oceano Specific Plan (2004)
- Rocky Canyon Specific Plan (2002)
- Santa Maria Sisquoc River Specific Plan (1998)
- Woodlands Specific Plan (1998)

Airport Land Use Plans

Three airport land use plans affect lands within the unincorporated county: the Airport Land Use Plan for the Oceano County Airport (2007), the Airport Land Use Plan for the Paso Robles Municipal Airport (2007), and the Airport Land Use Plan for the San Luis Obispo County Regional Airport (2005). These plans establish goals, policies, and standards for land uses within each airport planning area. These include standards that prohibit electrical generation within aviation safety areas.

Memorandum of Agreements (MOAs) with Incorporated Cities

The County has executed memorandums of agreements (MOAs) with the incorporated city of San Luis Obispo regarding development on unincorporated land within the city's sphere of influence. The MOAs are intended to guide the logical and orderly development of sphere of influence areas, as required by the Local Agency Formation Commission (LAFCO). The MOA between the City of San Luis Obispo and the County of San Luis Obispo includes policies from the City of San Luis Obispo General Plan to protect agricultural land, maintain open space and greenbelt buffers, and protect hillside areas.

SUMMARY OF LOCAL REGULATIONS AND POLICIES

Table 3.9-4 summarizes regulations and policies from the documents described above for land uses. Information is organized by planning area, where applicable.

TABLE 3.9-4
APPLICABLE LAND USE REGULATIONS AND POLICIES

Applicable Policies/Standards	Summary
Countywide	
Conservation and Open Space Element, Implementation Strategy E 7.1.1-5	Locate new or expanded energy generation facilities outside of recreational areas.
Conservation and Open Space Element, Policy E 6.1	Promote the development of sustainable energy sources and renewable energy projects through streamlined planning and development rules, codes, processing, and other incentives.

Applicable Policies/Standards	Summary
Conservation and Open Space Element, Policy E 6.4	Use solar electric power generating facilities, especially in areas remote from utility services and in places where such systems can meet specialized power needs cost effectively.
Conservation and Open Space Element, Policy E 6.6	Encourage distributed energy resources to increase the efficiency of the power and transmission system and use of local renewable fuel sources.
Conservation and Open Space Element, Policy E 6.8	Designate and protect areas that contain renewable energy resources such as wind, solar, geothermal, and small hydroelectric.
Conservation and Open Space Element, Policy EE 1.3	Balance the capacity for growth with the efficient use or reuse of available resources (energy, land, water, infrastructure) and reasonable acquisition of new resources.
Conservation and Open Space Element, Policy EE 4.8	Consider supporting reliable, sustainable, and cost-effective energy resources and the infrastructure to deliver them.
Conservation and Open Space Element, Policy OS 1.7	Protect open space resources by guiding development away from rural areas to more suitable areas.
Conservation and Open Space Element, Policy OS 2.1	Manage open space resources on public lands to protect, sustain, and, where necessary, restore the resources. Encourage such management strategies on private lands.
Land Use and Circulation Element, Principle 1	Preserve open space, scenic natural beauty, and natural resources. Conserve energy resources. Protect agricultural land and resources.
Land Use and Circulation Element, Principle 1, Policy 6	Encourage the protection and use of agricultural land for the production of food, fiber, and other agricultural commodities, and support the rural economy and locally based commercial agriculture.
Land Use and Circulation Element, Principle 1, Policy 7	Give highest priority to avoiding significant environmental impacts from development through site and project design. Where such impacts cannot be avoided, minimize them to the maximum extent feasible.
Carrizo Planning Area	
No additional policies or codes for the Carrizo Planning Area.	
North County Planning Area	
Paso Robles Municipal Airport Land Use Plan, Table 6	All Aviation Safety Areas, within the Airport Review Area Combining Designation: Electricity generation is prohibited.
San Luis Obispo Planning Area	
Los Ranchos-Edna Specific Plan, Table III-C	Los Ranchos/Edna Village Specific Plan Area: Electricity generation is prohibited.
Memorandum of Agreement between the City of San Luis Obispo and County of San Luis Obispo regarding the City's Sphere of influence (Resolution No. 2005-324), Exhibit E	Within the City of San Luis Obispo Sphere of Influence: The County and City have committed to cooperate for implementation of both City and County policies. These include protection of open space, preservation of agricultural land for agricultural uses, and identification of appropriate greenbelt uses. Development of prime agricultural land may be permitted if the development protects agricultural land in the urban reserve or greenbelt use. For development that occurs on any parcel that crosses the urban reserve of development limit lines, the portion outside of the lines should be transferred to land inside the lines. Development standards are provided (LU 6.2.2) that limit projects to low profiles, minimized grading, and compatible painting and design.
South County Planning Area	
No additional policies or codes for the South County Planning Area.	

3.9.3 IMPACTS AND MITIGATION MEASURES

THRESHOLDS OF SIGNIFICANCE

A land use and planning impact is considered significant if implementation of the RESP would result in any of the following:

1) Be potentially inconsistent with land use policy/regulation (general plan, local coastal plan, specific plan, clean air plan, etc.) adopted to avoid or mitigate for environmental effects.

2) Be potentially inconsistent with any habitat or community conservation plan.

3) Be potentially inconsistent with adopted agency environmental plans or policies with jurisdiction over the proposed project.

4) Be potentially incompatible with surrounding land uses.

5) Preclude an existing or permitted land use, or create a disturbance that would diminish the function of a particular land use, including recreational trails and facilities.

Potential inconsistencies with any habitat or conservation plan (Threshold 2) are analyzed for direct impacts to biological resources in Section 3.4, Biological Resources, of this EIR. Other thresholds for land use and planning are addressed below.

METHODOLOGY

The evaluation of the potential land use impacts associated with implementation of the proposed Program is based on a review of planning documents, including various components and policies of the County General Plan. The following impact discussions relate to policy consistency and direct land use impacts that would result from the proposed Program, including policy documents, the LUO, the Renewable Energy Combining Designation map, and other Program components. Other analysis sections of this EIR address secondary impacts of land use activities and development. The reader is referred to the relevant sections of this EIR for a detailed analysis of other relevant environmental effects as they relate to a particular issue area, such as aesthetics and visual resources (Section 3.1), agricultural resources (Section 3.2), air quality (Section 3.3), biological resources (Section 3.4), and cultural resources (Section 3.5).

PROJECT IMPACTS AND MITIGATION MEASURES

Be Potentially Inconsistent With Land Use Policy/Regulation Adopted to Avoid or Mitigate for Environmental Effects (Threshold 1)

Impact 3-9-1 Implementation of the proposed Program could result in potential inconsistencies with County land use policies and regulations adopted to avoid or mitigate for environmental effects. This impact is considered **less than significant (Class III)**.

The proposed Program aims to consolidate, amend, and streamline existing regulations for renewable energy facilities in the inland planning areas, with a focus on avoiding environmental

effects. The current code regulates renewable energy facilities through several mechanisms, as described below.

1) Interpretation of whether a proposed facility is consistent with the definition of electric-generating plants in Article 8, as defined in Section 22.80.030.E of Title 22. Electric-generating plants include any facility "engaged in the generation and distribution of electrical energy for sale" (Title 22, page 8-22). Any electric facility generating energy for sale is subject to the land use requirements of Title 22. Facilities that do not generate energy for sale are not considered electric generating plants and are therefore allowable without a land use permit and subject only to a building permit.

2) Requirement of a Minor Use Permit for wind energy conversion systems (WECS), defined in Article 8 of Title 22 as "Any device which converts wind energy to a form of usable energy" (Title 22, page 8-77).

3) Requirement of a Zoning Clearance or Minor Use Permit for all other types of electric-generating plants, depending on the area of site disturbance. Section 22.32.020.A of Title 22 presents of threshold of 40,000 square feet for site disturbance. Electric-generating plants disturbing less than 40,000 square feet require a Minor Use Permit, while all other electric-generating plants disturbing 40,000 square feet or more require a Minor Use Permit.

4) Provision of development standards for several electric-generating plant types throughout Chapter 22.32.

The County's two discretionary permit processes, the Minor Use Permit and the Conditional Use Permit, require an environmental determination to determine the appropriate level of California Environmental Quality Act (CEQA) review. The environmental determination process for discretionary review is described in Sections 22.62.050.B and 22.62.060.B of Title 22. The County's Environmental Coordinator completes an environmental determination to identify whether the project requires a negative declaration or an environmental impact report.

For ministerial permits, projects only require an environmental determination where Site Plan Review is triggered by Chapter 22.52 (Drainage) or Chapter 22.14 (Combining Designations) of Title 22 (see Section 22.62.040.B, Site Plan Review). If during an environmental determination, it is determined that an EIR is required, the project will be processed and authorized only as a Conditional Use Permit (Section 22.62.060). If, during an environmental determination, it is determined that no EIR is required, processing will be as described in Section 22.62.040.B.2 and 22.62.040.B.3 of the LUO.

Where energy-generating facilities are subject to Zoning Clearance or a Site Plan Review, these projects are reviewed as ministerial land use permits and not de facto subject to an environmental determination, unless otherwise required by other project or site conditions. Energy-generating facilities currently allowable with Minor Use Permits include facilities disturbing less than 40,000 square feet and WECS. While existing permit requirements for energy-generating facilities are generally based on the area of site disturbance, proposed permit requirements focus on size criteria and renewable energy technology.

New permit requirements for solar electric facilities (SEFs) focus on the total acreage of the project and site criteria, while permit requirements for WECS focus on the height and location of the facility. This proposed process allows for varying permit processes based on the type of facility and anticipated environmental impacts. The range of technologies and permit

requirements established in the proposed Program allow ministerial permit approval where projects meet criteria that avoid or mitigate environmental effects.

The proposed RESP identifies a process for projects to identify and avoid potential environmental effects. New permit requirements would address gaps in the existing standards, identifying a range of site-level criteria and project characteristics that require discretionary review. Proposed permit requirements in Chapter 22.32 would rely on new "tiers" of SEFs and WECS. These tiers correspond to proposed definitions in Article 8 distinguishing between different types of electric-generating plants. These proposed definitions correspond to new permit requirements proposed for Chapter 22.32.

Within each tier of renewable energy facility, ministerial permit approval would be available only for projects consistent with characteristics that would mitigate or avoid potential environmental impacts. For instance, Tier 1 SEFs would be allowed when less than 20 acres in size and proposed on land with minimal potential for environmental impacts, including when (1) located on the roof or structure of a conforming use; or (2) located on land that is graded, disturbed, or altered; or (3) located on brownfield land that was previously developed for industrial or commercial purposes and degraded or contaminated and then abandoned or underused. This new tier of a type of electric-generating plant identifies necessary site criteria for ministerial permit approval. Projects inconsistent with these permit criteria are ineligible for streamlining. As a result, the new tiers of electric-generating plants provide assurances that projects receiving ministerial permit approval are avoiding potential environmental impacts.

Revisions to Title 22 also ensure that emerging types of renewable energy technologies (such as biomass)are subject to a discretionary permit process when appropriate, based on project size or land use category, including energy storage and solar thermal facilities. Clarifying permit processes for these technologies ensures that any potential environmental effects not anticipated by Title 22 are addressed through a discretionary permit process and environmental review. Currently, Chapter 22.32 allows electric-generating plants less than 40,000 square feet with Zoning Clearance. Revisions to Title 22 ensure that solar thermal facilities always require a Conditional Use Permit, while describing where energy storage facilities are primary land use permits versus accessory uses permitted with other energy-generating facilities.

Proposed standards in the RESP would be applicable countywide (except in coastal areas), establishing new provisions such as undergrounding of electrical equipment, safety signage, and the process for abandonment of ground-mounted facilities. These new standards also help to further avoid or mitigate any potential environmental effects of energy-generating facilities.

The RESP also removes limitations on renewable energy established by Article 9 of Title 22. Currently, Article 9 (Community Planning Standards) prohibits electricity generation in select planning areas, communities, or areas throughout the county. Areas such as the Los Ranchos/Edna Village Specific Plan area are precluded from any type of electricity generation, including renewable energy production. Based on the applicability of land use permits described in Section 22.06.020 of Title 22, limitations in Article 9 preclude uses that are otherwise allowable as identified in Title 22, Article 2. For instance, where Article 2 identifies electric-generating plants as an allowable use, electricity production is not allowable if Article 9 prohibits electricity production for that parcel or area. The RESP removes these prohibitions and inconsistencies. Removing Article 9 limitations on electricity production provides greater coordination throughout Title 22, allowing projects to rely on the proposed permit requirements in Chapter 22.32. The new permit requirements for renewable energy facilities would require any proposed in these areas to either avoid or mitigate potential environmental effects, or undergo discretionary review. Thus, revisions to Article 9 remove barriers to renewable energy, while

revisions to Chapter 22.32 seek to apply discretionary review wherever a project may pose environmental impacts.

The project implements General Plan policies to streamline permit processes for renewable energy facilities and expand renewable energy generation. Proposed revisions to Title 22 address adopted goals, policies, and implementation strategies of the Conservation and Open Space Element. Primary policies and implementing strategies supported by the project include, but are not limited to, the following:

- **Conservation and Open Space Element, Policy E 6.1:** Promote the development of sustainable energy sources and renewable energy projects through streamlined planning and development rules, codes, processing, and other incentives.
- **Conservation and Open Space Element, Policy E 6.2, Implementing Strategy 6.2.3:** Disturbed sites: Encourage and support the development of solar and wind power and other renewable energy systems as commercial energy enterprises, and … examine the potential for use of previously disturbed sites such as former mine sites, or disturbed urban areas such as parking lots.
- **Conservation and Open Space Element, Policy E 6.6:** Encourage distributed energy resources to increase the efficiency of the power and transmission system and use of local renewable fuel sources.

Because the proposed project clarifies development processes, requirements, and standards for renewable energy facilities, and because the new permit requirements reduce permit requirements for renewable energy facilities where ministerial permit approval is consistent with environmental protection and adopted county policies, the project promotes streamlining of renewable energy facilities while avoiding or mitigating environmental effects. By encouraging renewable energy in a manner that avoids or mitigates environmental impacts, the proposed RESP will have a **less than significant (Class III)** impact on policies and regulations adopted to avoid or mitigate environmental effects.

Renewable Energy Combining Designation

The project implements General Plan policy to prioritize renewable energy development where it is feasible and does not significantly harm sensitive environmental resources. As described in other sections of this EIR, the proposed Renewable Energy (RE) Combining Designation provides ministerial permit approval for projects that meet performance standards identified in proposed additions to Section 22.14.100. Incorporating performance standards into Title 22 provides coordination between the code and adopted policies for renewable energy.

The RE Combining Designation process establishes application requirement and project design and operational standards to ensure consistency with adopted County policies. For instance, as described in other sections of this EIR, projects to be located on Important Agricultural Soils in the RE Combining Designation must provide conservation easement(s) as defined in the designation to become eligible for ministerial decision. Proposed standards in the designation require projects to demonstrate compliance with existing County policies, including proposed performance standards for setbacks, vegetation clearing and restoration, and avoidance/protection of habitat and special-status species. Project applicants demonstrating consistency with Section 22.14.100 and Chapter 22.32 can achieve ministerial permit approval. Site or project conditions that trigger discretionary review are clearly identified in Section 22.14.100.

Proposed additions to Section 22.14.100 screen out projects from streamlining that pose potential environmental impacts and require those projects to follow a discretionary permitting process that may trigger additional environmental review. Projects ineligible for streamlining under Section 22.14.100 are subject to the countywide permit requirements for renewable energy proposed for Chapter 22.32.

The proposed project includes LUO amendments that codify and/or cite adopted Conservation and Open Space Element (COSE) strategies relating to renewable energy. The project also includes minor revisions to the Land Use and Circulation Element (LUCE), including changes that provide greater consistency between the renewable energy priorities of the COSE and the LUCE. Several key policies that the proposed RESP implements include the following:

- **Conservation and Open Space Element, Policy E 6.4:** Use solar electric power generating facilities, especially in areas remote from utility services and in places where such systems can meet specialized power needs cost effectively.
- **Conservation and Open Space Element, Policy E 6.6:** Encourage distributed energy resources to increase the efficiency of the power and transmission system and use of local renewable fuel sources.
- **Conservation and Open Space Element, Policy E 6.8:** Designate and protect areas that contain renewable energy resources such as wind, solar, geothermal, and small hydroelectric.
- **Conservation and Open Space Element, Policy E 6.8:** Where renewable energy resources have been identified and mapped, renewable energy shall be given high priority while balancing the protection of other environmental resources.

The RE Combining Designation would designate and encourage development of renewable energy resources, meeting County objectives to develop local renewable energy resources. Additionally, proposed measures under Section 22.14.100 identify when technical studies are warranted and if discretionary review is needed, based on certain adopted County policies. For instance, any potential conflicts with the Agricultural Element's protection of Important Agricultural Soils are addressed through required studies and additional standards in Section 22.14.100. Such projects that may harm environmental issues protected by other County policies are screened through the proposed study process or mitigated through proposed standards, protecting such resources as agricultural lands or special-status species.

Accordingly, the RE Combining Designation is consistent with and implements County policies for renewable energy while providing standards and studies to protect other environmental issues addressed in the County General Plan. Therefore, the Program will provide streamlining for projects that avoid or mitigate potential environmental impacts consistent with adopted policies and regulations. New regulations will also identify project criteria that require additional studies and discretionary review to address potential environmental effects. Because the proposed Program provides a process for projects to avoid or mitigate environmental effects, this land use impact is considered **less than significant (Class III)**.

Be Potentially Inconsistent with Adopted Agency Environmental Plans or Policies with Jurisdiction Over the Proposed Project (Threshold 3)

Impact 3-9-2 Implementation of the proposed Program could be potentially inconsistent with adopted environmental plans or policies of other agencies with jurisdiction over projects. This impact is considered **less than significant (Class III)**.

While the proposed RESP identifies multiples categories of renewable energy facilities, projects only qualify for permit streamlining where sited and designed in a manner that reduces potential environmental impacts based on standards in the Program. Typical characteristics of projects that can obtain ministerial permit approval in the RESP include:

- Accessory energy-generating facilities that are within size limitations, located on parcels with development, and located on specified land use categories deemed to have minimal impacts as described in other sections of this EIR (see proposed Chapter 22.32).
- Tier 1 WECS and TIER 1 SEFs, which include WECS or SEF structures that are roof-mounted or SEFs that are located on graded, disturbed, altered, or Brownfield land that was previously developed for industrial or commercial purposes and degraded or contaminated and then abandoned or underused (see proposed Chapter 22.32), and Tier 2 and Tier 3 SEFs within the RE Combining Designation that are consistent with the performance standards and project design standards of proposed Section 22.14.100. All performance standards included in proposed Section 22.14.100 are analyzed in the applicable resource sections of this EIR.

These provisions ensure that ministerial permit review is provided only to those projects with no substantial conflicts with adopted environmental plans or policies. Countywide, ministerial permit approval is available only to accessory energy-generating facilities and Tier 1 WECS or SEF projects that would not require environmentally related permits from agencies other than the County. Within the RE Combining Designation, Tier 2 and Tier 3 SEFS up to 160 acres could qualify for streamlining only where they do not require environmentally related permits or demonstrate consistency with proposed standards or Section 22.14.100.

Further, as described above for Threshold 1, the RESP also provides greater consistency with adopted policies of the San Luis Obispo County General Plan, providing clarity for projects to implement renewable energy while minimizing impacts to environmental resources consistent with County policies. Because of the RESP's alignment with adopted County policies, and because projects requiring additional environmentally related permits are no longer eligible for ministerial review, the project avoids potential inconsistencies with adopted County environmental plans or policies. This impact is considered **less than significant (Class III).**

Be Potentially Incompatible with Surrounding Land Uses (Threshold 4)

The proposed project provides new development standards and site criteria that minimize impacts to surrounding land uses. These standards include additional setbacks, height limits, and siting requirements that limit the impact of proposed renewable energy facilities on surrounding land uses. Whereas existing development standards for renewable energy facilities are largely reflective of underlying uses, proposed standards in the RESP are proposed based on underlying site criteria, land use category, and renewable energy technology, providing special use standards that better define and minimize impacts to surrounding uses from renewable energy.

Impact 3-9-3 The proposed Program could result in potential land use incompatibilities. This impact is considered **less than significant (Class III)**.

Existing development standards in Title 22 for renewable energy technology types are limited, largely deferring to the general site planning and project design standards in Chapter 22.10 for general setbacks and height limitations. For instance, the current Title 22 does not establish setbacks specific to SEFs. Instead, setbacks for SEFs are determined through a Conditional Use Permit process or are based on the underlying land use or land use category of the proposed project, depending on the project itself. The proposed RESP includes new standards for SEFs and WECS countywide in Chapter 22.32, with additional standards for Tier 2 and Tier 3 SEFs in the RE Combining Designation established in Section 22.14.100. The proposed new standards are reflective of the unique characteristics of SEFs and WECs, providing additional setbacks, height limitations, and design criteria specific both to the proposed technology and to the underlying land use category.

The unique characteristics of SEFs and WECS may pose conflicts to an adjacent land use. For example, as described in other sections of this EIR, solar energy facilities and wind energy conversion systems may result in new sources of daytime glare and lighting impacts to adjacent receptors (see Section 3.1, Aesthetics and Visual Resources). Within the RE Combining Designation, Tier 2 and Tier 3 SEFs allowable with a ministerial permit may be up to 160 acres in size. Projects of this scale are likely to change the visual character of the area. Another example of potential impacts to surrounding uses includes creation of new sources of noise. While the construction of new SEFs and WECS would result in noise caused by equipment, the ongoing operation of these projects involves the use of on-site power inverters and other switchgear infrastructure.

Both existing standards of the County Code and proposed standards included in the Program would reduce effects to surrounding land uses. To minimize the potential for glare, the Program includes revisions to Chapter 22.32 that require all solar facilities to use nonreflective surfaces (see Section 22.32.050.D.1). Where required, exterior lighting would be activated by motion sensors, fully shielded, and downcast (Section 3.1, Aesthetics and Visual Resources) (see Section 22.32.050.D.5).

New standards for discretionary projects direct projects to minimize and avoid such impacts, as exemplified in a new standard for Tier 3 WECS that requires projects to "be located to minimize visual impacts to residences" (see 22.32.060.D.6). The existing County Noise Ordinance (Sections 22.10.120.B–D) also requires that such equipment be enclosed or sited at such a distance from noise-sensitive land uses as to ensure compliance with noise performance standards (see Section 3.10, Noise). Proposed standards for Chapter 22.32 also seek to avoid impacts to surrounding uses. For instance, Chapter 22.32 establishes greater setbacks for SEFs in rural land use categories, recognizing the greater potential size and impacts of SEFs in rural areas. These standards clarify minimum setback requirements and height standards, ensuring adequate buffers from existing uses. Whereas the current Title 22 provides varying standards that do not directly correspond to renewable energy technology types, the proposed RESP includes a clear process with a range of development standards that reflect both the scale of the proposed project and the underlying land use category.

For instance, Section 22.32.060.B provides new setbacks for WECS that require facilities to be a minimum of two times the overall machine height, avoiding the potential for damaged WECS to fall onto adjacent properties or uses. Proposed limitations on accessory energy-generating facilities also limit the location of such facilities, precluding such projects where the proposed project is closer than 100 feet to any adjacent property. Currently, such accessory facilities are allowed based on interpretation of the County Code subject to a Building Permit, without such limitations to their location or placement. As a result of proposed additions to Title 22, the County could facilitate the siting of SEFs and WECS consistent with the analysis of this EIR, reducing

potential conflicts for existing land uses. Therefore, as a result of standards and permit processes proposed, indirect land use incompatibility impacts resulting from the Program will be **less than significant (Class III)**.

Preclude an Existing or Permitted Land Use, or Create a Disturbance That Would Diminish the Function of a Particular Land Use (Threshold 5)

Impact 3-9-4 The proposed Program could indirectly create a disturbance that would diminish the function of a particular land use. This impact is considered **significant, unavoidable and adverse (Class I)**.

As discussed in Section 3.2, Agricultural Resources, the proposed Program could result in the conversion of Important Agricultural Soils to nonagricultural uses. Specifically, ground-mounted Tier 1 SEFs would be eligible for streamlining as long as they are located on disturbed land that does not have Class I or Class II soils. This does not preclude the potential for ground-mounted Tier 1 SEFs up to 20 acres in size being developed on Important Agricultural Soils, as disturbed soils can also be Important Agricultural Soils. Because some Important Agricultural Soils may be converted to nonagricultural uses, the function of those lands would accordingly be diminished. This impact is considered **significant, unavoidable, and adverse (Class I).** Please refer to Section 3.2, Agricultural Resources, for additional analysis and findings regarding the proposed Program's potential indirect impacts to agriculture.

CUMULATIVE IMPACTS

The proposed Program seeks to implement and supplement adopted General Plan policy to promote renewable energy while minimizing impacts to environmental resources. Program objectives include streamlining renewable energy in suitable locations. While the Program seeks to remove barriers to renewable energy and identifies land use categories where SEFs and WECS are allowable, the Program also provides standards and criteria to ensure projects are sited and developed in a manner that avoids, reduces, or mitigates potential environmental impacts. For instance, new standards provide larger buffers from residential uses, adjacent parcels, or wetlands, with setbacks determined by the tier of renewable energy facility and the underlying land use category (see Chapter 22.32).

By avoiding and reducing environmental impacts for each parcel on which a SEF or WECS is proposed, the Program would also avoid or reduce cumulative impacts of renewable energy development in the county. The Program's land use and planning impacts are therefore less than cumulatively considerable.

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3.10 Noise

This section assesses potential noise effects from construction and operation of renewable energy projects. Specifically, this section analyzes potential noise impacts to the existing ambient noise environment due to development of renewable energy in San Luis Obispo County related to the Renewable Energy Streamlining Program (RESP or Program).

3.10.1 PHYSICAL SETTING

GENERAL INFORMATION ON NOISE

Noise is generally defined as unwanted or objectionable sound. To describe environmental noise and to assess impacts on areas sensitive to community noise, a frequency weighting measure that simulates human perception is customarily used. The frequency weighting scale known as A-weighting best reflects the human ear's reduced sensitivity to low frequencies and correlates well with human perceptions of the annoying aspects of noise. The A-weighted decibel scale (dBA) is cited in most noise criteria. A difference of more than 3 dBA is a perceptible change in environmental noise, while a 5 dBA difference typically causes a change in community reaction.

Community noise levels are closely related to the intensity of human activity and land use. Typical noise levels are provided in **Table 3.10-1**. Noise levels are generally considered low when ambient levels are below 45 dBA, moderate in the 45 to 60 dBA range, and high above 60 dBA. In wilderness areas, noise levels can be below 35 dBA. In small towns or wooded and lightly used residential areas, noise levels are more likely to be around 50 or 60 dBA. Levels around 75 dBA are more common in busy urban areas (e.g., downtown Los Angeles), and levels up to 85 dBA occur near major freeways and airports. Although people often accept the higher levels associated with very noisy urban residential and residential-commercial zones, these noise levels nevertheless are considered to be adverse to public health.

TABLE 3.10-1
NOISE LEVEL COMPARISON

Common Outdoor Activities	Noise Level (dBA)	Common Indoor Activities
Jet fly-over at 1,000 feet	110	Rock band
Gas lawn mower at 3 feet	100	
	90	Food blender at 3 feet
Diesel truck at 50 feet at 50 mph	80	Garbage disposal at 3 feet
Noisy urban area, daytime Gas lawn mower at 100 feet	70	Vacuum cleaner at 10 feet
Commercial area Heavy traffic at 300 feet	60	Normal speech at 3 feet
Quiet urban daytime	50	Large business office Dishwasher in next room
Quiet urban nighttime	40	Theater Large conference room (background)
Quiet suburban nighttime	30	Library
Quiet rural nighttime	20	Bedroom at night

Source: Caltrans, n.d.

Excessive noise is undesirable and may also cause physical and/or psychological damage. The amount of annoyance or damage caused by noise is dependent primarily on the amount and nature of the noise, the amount of ambient noise present before the intruding noise, and the activity of the person working or living in the area. Environmental and community noise levels rarely are of sufficient intensity to cause irreversible hearing damage, but disruptive environmental noise can interfere with speech and other communication and be a major source of annoyance by disturbing sleep, rest, and relaxation.

Noise levels from a particular source decline as distance to the receptor increases. Other factors, such as the weather and reflecting or shielding, also help intensify or reduce the noise level at any given location. A commonly used rule of thumb for roadway noise is that for every doubling of distance from the source, the noise level is reduced by about 3 dBA at acoustically "hard" locations (i.e., the area between the noise source and the receptor is nearly completely asphalt, concrete, hard-packed soil, or other solid materials) and 4.5 dBA at acoustically "soft" locations (i.e., the area between the source and receptor is normal earth or has vegetation, including grass).

Noise from stationary or point sources is reduced by about 6 to 7.5 dBA for every doubling of distance at acoustically hard and soft locations, respectively. Noise levels may also be reduced by intervening structures; generally, a single row of buildings between the receptor and the noise source reduces the noise level by about 5 dBA, while a solid wall or berm reduces noise levels by 5 to 10 dBA. The manner in which older homes in California were constructed generally provides a reduction of exterior-to-interior noise levels of about 20 to 25 dBA with closed windows. The exterior-to-interior reduction of newer residential units is generally 30 dBA or more.

GENERAL INFORMATION ON VIBRATION

Vibration is an oscillatory motion through a solid medium, in which the motion's amplitude can be described in terms of displacement, velocity, or acceleration. Typically, groundborne vibration generated by heavy equipment or traffic on rough roads attenuates rapidly with distance from the source of the vibration so that potential impact areas are usually confined within short distances (i.e., 200 feet or less) from the source (FTA 2006).

CARRIZO PLANNING AREA

The Carrizo Planning Area is located in the southeastern portion of the county and is largely rural and open space devoted almost exclusively to the agricultural uses of dry farming and rangeland. The planning area also encompasses the Carrizo Plain National Monument. The Carrizo Plain is crossed by State Route (SR) 58, which introduces some noise into the region. The quietest areas in San Luis Obispo County are those that are removed from major transportation-related noise corridors, urbanized areas with commercial and industrial development, and local industrial or other stationary noise sources. The Carrizo Plain is one of these representative quiet areas (SLO County 1992).

Most of the population in the Carrizo Planning Area is located in its one village area, California Valley, with a population of 356. Because noise levels are closely related to land use, California Valley and SR 58 would be expected to have the loudest ambient noise levels in the Carrizo Planning Area. As part of the Carrizo Energy Solar Farm, California Valley Solar Ranch, and Topaz Solar Farm, ambient noise measurements were taken near California Valley. The ambient noise

levels for California Valley range from between 30 to 66 dBA L_{eq} in the daytime to 24 to 50 dBA L_{eq} during nighttime hours (SLO County 2011).[1]

Sensitive Receptors

Noise-sensitive receptors are those areas of human habitation or substantial use where the intrusion of noise or vibration has the potential to adversely impact the occupancy, use, or enjoyment of the environment. The County identified residential development, schools, health care services, nursing and personal care, churches, public assembly areas, libraries and museums, hotels and motels, outdoor sports and recreation areas, and offices as noise-sensitive uses. In addition to human receptors, sensitive receptors also include wildlife.

California Valley residences, Carrisa Plains Elementary School, and other rural residences are the sensitive receptors in the Carrizo Planning Area.

NORTH COUNTY PLANNING AREA

The North County Planning Area includes most of the northern half of San Luis Obispo County. Approximately 95 percent of the North County area has land use designations of Agriculture, Rural Lands, and Open Space. These areas would be representative of quiet areas and would expect to have similar ambient noise levels as those in California Valley. Most of the planning area outside of the Highway 101 zone of influence, SR 46 zone of influence, and incorporated cities would be in this category.

The North County Planning Area is traversed east to west by SR 46 and SR 58 and is traversed north to south by Highway 101, a major source of noise in this planning area. The greatest transportation-related noise exposure would be along Highway 101, in particular in the Paso Robles and Atascadero areas. Generalized noise contours have been included in the County Noise Element, and a distance of between 800 to 1,200 feet generally characterizes the 60 dBA contour for Highway 101. The 60 dBA contours for State Routes 46 and 58 are much closer to the pavement because of the lower traffic volumes on those routes (SLO County 2012).

The Union Pacific Railroad traverses this planning area in a north–south direction. On average, four freight trains and two passenger trains pass through the county every day (SLO County 2012). There are a variety of railroad operating conditions in the county, including grade crossings, curves, grades, and congested areas in cities or unincorporated communities. Noise levels associated with the railroad in the county vary widely.

Paso Robles Municipal Airport is located north of SR 46 in this planning area and would increase the ambient noise levels surrounding it.

The primary stationary sources of noise include industrial, commercial, and agriculture operations. Examples include the Union Asphalt Batch Plant on Ramada Drive in Templeton, the Navajo Concrete Batch Plant on Ramada Drive, the Dirtman Sand and Gravel Plant on Templeton Road, all of which are in Templeton, and the Southern Pacific Milling Company Sand and Gravel Plant in Santa Margarita.

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[1] For simplicity, sound levels are usually best represented by an equivalent level over a given time period (L_{eq}). The L_{eq}, or equivalent sound level, is a single value for any desired duration, which includes all of the time-varying sound energy in the measurement period, usually one hour.

Agriculture operations also present stationary noise sources. Large agriculture operations are clustered around SR 46, east of Highway 101. Stationary agriculture noise sources include processing facilities; agriculture farm vehicles including tractors, trucks, mowers, and all-terrain vehicles; field operations including harvesting, mowing, and spraying; wind machines (temperature-regulating equipment); well water pumps; and pest-repellent devices.

Sensitive Receptors

Much of the development in the North County Planning Area is oriented to commuter and retirement living, service businesses, and tourism in the area around Paso Robles and Atascadero. While incorporated cities, including Paso Robles and Atascadero, would not be part of the RESP, residences near the city boundaries would be considered sensitive receptors if they were in the area affected by noise. Rural residential areas and the unincorporated communities of San Miguel, Santa Margarita, Shandon, Templeton, Creston, Garden Farms, and Heritage Village would be sensitive receptors in this planning area.

SAN LUIS OBISPO PLANNING AREA

The San Luis Obispo Planning Area is located in the central western portion of the county, inland from the Coastal Zone. It includes a compact urban center around the San Luis Obispo surrounded by open agricultural lands. Primary sources of noise include Highway 101, Highway 1, SR 227, and Los Osos Valley Road. The ambient noise along Highway 101 would be as described for the North County Planning Area.

Other larger sources of noise include Camp San Luis Obispo Airfield and San Luis Obispo County Regional Airport.

Examples of primary stationary noise sources include the Southern Pacific Milling Company Concrete Plant and Air-Vol Block, both on Suburban Road in San Luis Obispo.

Agriculture operations, in particular along Los Osos Road, would include some stationary noise sources as well, similar to those described for the North County Planning Area.

Sensitive Receptors

The primary developed area in the San Luis Obispo Planning Area is the city of San Luis Obispo, which is outside the RESP. Residences on the city boundaries may be subject to noise resulting from the Program. The unincorporated communities of Avila Beach and Los Ranchos/Edna Village and rural residences would be considered sensitive receptors in this area. Recreational areas such as the Montana de Oro State Park would also be sensitive receptors.

SOUTH COUNTY PLANNING AREA

The South County Planning Area generally consists of the land south and east of San Luis Obispo to the Santa Barbara County line, between the Coastal Zone and the Carrizo Plain. Land uses in this large area are diverse, ranging from urban and suburban development in the incorporated cities and older town sites, to rural residential and agricultural uses in the foothill and Nipomo Mesa areas, to the scenic and natural characteristics of the coastal ridges and Los Padres National Forest. The coastal ridges and the National Forest would have low ambient noise levels.

Areas surrounding Highway 101, Highway 1, and near the urban centers have higher ambient noise levels as described for the North County Planning Area. The Cold Canyon Landfill also introduces additional noise into the region.

Sensitive Receptors

Sensitive receptors in the South County Planning Area are the residences in Arroyo Grande, an incorporated city that is not part of the RESP. The unincorporated communities of Nipomo, Oceano, Black Lake, Callender/Garrett, and Los Berros along with other rural communities such as Huasna would be sensitive receptors in the planning area.

3.10.2 REGULATORY SETTING

STATE

Government Code

Government Code Section 65302(f) requires that a noise element be included as part of all city and county general plans. A summary of the required contents of a noise element is presented below.

1) A noise element shall identify and appraise noise problems in the community. The noise element shall recognize the guidelines established by the Office of Noise Control in the California Department of Health Services and shall analyze and quantify, to the extent practicable, as determined by the legislative body, current and projected noise levels for all of the following sources:

    - Highways and freeways.
    - Primary arterials and major local streets.
    - Passenger and freight railroad operations and ground rapid transit systems.
    - Commercial, general aviation, heliport, helistop, and military airport operations, aircraft over-flights, jet engine test stands, and all other ground facilities and maintenance functions related to airport operation.
    - Local industrial plants, including, but not limited to, railroad classification yards.
    - Other ground stationary sources identified by local agencies as contributing to the community noise environment.

Noise contours are to be shown for the above noise sources based on noise monitoring and accepted noise modeling techniques. The noise contours are used as a guide for designating land uses within the land use element that minimizes the exposure of community residents to excessive noise.

California Building Code

Title 24 of the California Code of Regulations contains standards for allowable interior noise levels associated with exterior noise sources (California Building Code, 1998 edition, Volume 1, Appendix Chapter 12, Section 1208A). The standards apply to new hotels, motels, dormitories, apartment houses, and dwellings other than detached single-family residences. The standards state that the interior noise level attributable to exterior sources cannot exceed 45 dBA in any

habitable room. Proposed residential structures to be located where the annual L_{dn} or CNEL exceeds 60 dBA require an acoustical analysis showing that the proposed building design would achieve the prescribed allowable interior noise standard. The noise metric (measurement period, such as hourly or daily) is either the day-night average sound level (L_{dn}) or the community noise equivalent level (CNEL), consistent with the noise element of the local general plan. Worst-case noise levels, either existing or future, are used as the basis for determining compliance with these standards (Caltrans 2002a).

LOCAL

San Luis Obispo County General Plan – Noise Element

The General Plan Noise Element identifies the major sources of noise in the county (roads, railways, airports, and stationary sources) and describes the policies and programs to reduce noise impacts. The Noise Element identifies the most significant policies as those "that limit noise exposure within noise-sensitive land uses, and performance standards for new commercial and industrial uses that might adversely impact noise-sensitive land uses." The element also describes the process for identifying when noise mitigation is required, suggests standard mitigation practices, and contains the requirements for an acoustical analysis.

San Luis Obispo County Noise Standards

The Land Use Ordinance (LUO) contains standards and requirements for reducing noise impacts on sensitive uses. These standards include the maximum allowable interior and exterior noise levels, protocols for measuring noise levels, and requirements for submitting noise studies as part of a permit application. Sections containing specific items related to noise are discussed below. Noise may also be addressed in other LUO sections not described in greater detail below; these sections are included in **Table 3.10-2.**

LUO – Permit Procedures

The Permit Application Filing and Processing chapter of the LUO (Title 22, Chapter 22.60) identifies when projects must submit a noise study. Projects are required to include a noise study as part of the application for a Site Plan Review, Minor Use Permit, or Conditional Use Permit when specified in the standards of the Noise Element (see the General Plan – Noise Element section), or if the project is adjacent to a potential noise generating use, as described in Title 22, Section 22.60.040.D.

LUO – Noise Standards

The LUO establishes acceptable exterior and interior noise levels at different times of the day in the Noise Standards section (Title 22, Section 22.10.120). Sections 22.10.120.B and 22.10.120.C of the San Luis Obispo County Noise Ordinance establish standards for acceptable exterior and interior noise levels (SLO County 2014). Section 22.10.170.A addresses earthborne vibrations. These standards are intended to protect persons from excessive noise levels, which are detrimental to the public health, welfare, and safety and contrary to the public interest because they can interfere with sleep, communication, relaxation, and the full enjoyment of one's property; contribute to hearing impairment and a wide range of adverse physiological stress conditions; and adversely affect the value of real property. It is the intent of this ordinance to protect persons from excessive levels of noise within or near residential and other specified noise-sensitive land uses.

Section 22.10.120.B – Exterior Noise Level Standards

	Daytime (7 a.m. to 10 p.m.)	Nighttime (10 p.m. to 7 a.m.)[1]
Hourly L_{eq}	50 dBA	45 dBA
Maximum Level	70 dBA	65 dBA

Notes:
1. Applies only to uses that operate or are occupied during nighttime hours.

- *In the event the measured ambient noise level exceeds the applicable exterior noise level standard in subsection (a), the applicable standard shall be adjusted so as to equal the ambient noise level plus one dB.*
- *Each of the exterior noise level standards specified in subsection (a) shall be reduced by five dB for simple tone noises, noises consisting primarily of speech or music, or for recurring impulsive noises.*
- *If the intruding noise source is continuous and cannot reasonably be discontinued or stopped for a time period whereby the ambient noise level can be measured, the noise level measured while the source is in operation shall be compared directly to the exterior noise level standards.*

Section 22.10.120.C – Interior Residential Noise Level Standards

	Daytime (7 a.m. to 10 p.m.)	Nighttime (10 p.m. to 7 a.m.)
Hourly L_{eq}	40 dBA	35 dBA
Maximum Level	60 dBA	55 dBA

Notes:

- *In the event the measured ambient noise level exceeds the applicable exterior noise level standard in subsection (a), the applicable standard shall be adjusted so as to equal the ambient noise level plus one dB.*
- *Each of the exterior noise level standards specified in subsection (a) shall be reduced by five dB for simple tone noises, noises consisting primarily of speech or music, or for recurring impulsive noises.*
- *If the intruding noise source is continuous and cannot reasonably be discontinued or stopped for a time period whereby the ambient noise level can be measured, the noise level measured while the source is in operation shall be compared directly to the exterior noise level standards.*

Section 22.10.170.A – Vibration

Any land use conducted in or within one-half mile of an urban or village reserve line shall be operated so as to not produce detrimental earthborne vibrations perceptible at or beyond the boundary of the industrial land use producing the vibration source. Exceptions to this standard include vibrations from construction, the demolition of structures, surface mining activities or geologic exploration between 7:00 a.m. and 9:00 p.m., and vibrations from moving sources such as trucks and railroads.

The Noise Standards section (Title 22, Section 22.10.120) also contains activities which are exempt from noise standards, noise standards for various specialized pieces of equipment (including electrical substations), and a description of the proper means for measuring noise levels in evaluating compliance with the standards. Section 22.10.120.A identifies uses that are exempt from the noise standards identified in Sections B and C.

Section 22.10.120.A – Exceptions to Noise Standards

The standards presented above in Sections 22.10.120.B and 22.10.120.C are not applicable to noise generated from the following sources:

- Noise sources associated with construction, provided such activities do not take place before 7:00 a.m. or after 9:00 p.m. any day except Saturday or Sunday, or before 8:00 a.m. or after 5:00 p.m. on Saturday or Sunday.
- Noise sources associated with work performed by private or public utilities in the maintenance or modification of its facilities.

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

The Conservation and Open Space Element (COSE) addresses noise issues in association with energy production. Policies in the COSE support the use of technologies that minimize the amount of noise generated by large-scale (10 megawatt (MW) or larger) solar projects.

Summary of Local Regulations and Policies

Table 3.10-2 summarizes regulations and policies from the documents described above, including applicable noise levels, protocols for measuring noise levels, and details on when to include noise studies in permit applications. The table also identifies where policies or standards only apply to subareas or land use designations.

TABLE 3.10-2
LOCAL POLICIES AND REGULATIONS FOR NOISE

Applicable Code Section	Summary
Countywide	
Noise Element, Implementation Measure 4.4	Discretionary projects that may expose existing uses to noise levels in excess of identified standards shall submit an acoustical analysis with the project application and incorporate appropriate noise mitigation measures.
Noise Element, Implementation Measure 4.5	Noise standards and required mitigation measures may be waived if compliance with said standards and measures is not feasible, provided that noise levels are mitigated to the maximum extent feasible, at the discretion of the reviewing officer.
Noise Element, Policy 3.3.5	Noise from new stationary sources that will expose an existing noise-sensitive use to noise levels which exceed identified standards shall reduce noise levels to or below said standards.
Conservation and Open Space Element, Implementation Strategy E 6.2.1	Design large-scale commercial solar projects to minimize the effects of the project, including noise generation.
Title 22, Section 22.10.120.A	Identifies noise sources exempt from the standards provided in Title 22, Section 22.10.120.B through D.
Title 22, Section 22.10.120.B	Exterior noise levels at any noise-sensitive land uses shall not exceed the identified levels at the specified times.
Title 22, Section 22.10.120.C	Interior noise levels within any noise-sensitive land uses shall not exceed the identified levels at the specified times.
Title 22, Section 22.10.120.D.3	Specified electrical substations may not generate noise levels in excess of 50 dB from 10 p.m. to 7 a.m., or in excess of 55 dB from 7 a.m. to 10 p.m., as measured at the property line of the receiving land use.
Title 22, Section 22.30.360.D.2	Applications for electric power transmission lines shall include estimates of noise generated during various operating and weather conditions.

Applicable Code Section	Summary
Title 22, Section 22.60.040.D.6	Applications for a Site Plan Review, Minor Use Permit, or Conditional Use Permit must submit a noise study if required under the Noise Element or if the project is adjacent to a potential noise generator.
Carrizo Planning Area	
No additional policies or code specific to the Carrizo Planning Area.	
North County Planning Area	
No additional policies or code specific to the North County Planning Area.	
San Luis Obispo Planning Area	
No additional policies or code specific to the San Luis Obispo Planning Area.	
South County Planning Area	
No additional policies or code specific to the South County Planning Area.	

3.10.3 IMPACTS AND MITIGATION MEASURES

THRESHOLDS OF SIGNIFICANCE

Appendix G (Environmental Checklist Form) of the CEQA Guidelines and the County's environmental checklist indicate that significant noise impacts occur when the project:

1) Exposes people to noise levels in excess of standards established in local noise ordinances or general plan noise elements.

2) Causes a substantial permanent or temporary increase in noise above levels existing without the project.

3) Exposure of persons to or generation of excessive groundborne vibration or groundborne noise levels.

4) If located within the Airport Review designation or adjacent to a private airstrip, expose people residing or working in the project area to severe noise levels.

The threshold of significance for noise-related impacts is the exceedance of a standard as established in the County's Noise Element by any proposed development project. Noise impacts of any development project are considered significant if noise resulting from construction or operation occurs beyond the specified level and/or time frame set by the County of San Luis Obispo. Where the established standard is already exceeded, a significant increase in a noise level is taken as 1 decibel.

The Noise Element establishes standards for stationary noise sources , which is that generated by industrial facilities, including future renewable energy facilities proposed by the project. The applicable County standards for evaluating noise impacts generated from stationary noise sources are 50 dBA L_{eq} in the daytime and 45 dBA L_{eq} during nighttime hours, as determined at the property line of the receiving land use (see **Table 3.10-3**).

TABLE 3.10-3
COUNTY OF SAN LUIS OBISPO STATIONARY NOISE STANDARDS

Level	Daytime (7 am–10 pm)	Nighttime (10 pm–7 am)
Hourly average level (L_{eq}) dB	50	45
Maximum level (Max) dB	70	65
Maximum level, dB-Impulsive Noise	65	60

Source: SLO County 1992

The Noise Element also establishes noise standards to address noise created by new transportation noise sources as shown in **Table 3.10-4**. Development that generates transportation noise is required to be mitigated so as not to exceed the noise levels specified in **Table 3.10-4** within the outdoor activities areas and interior spaces of existing noise-sensitive land uses.

TABLE 3.10-4
MAXIMUM ALLOWABLE NOISE EXPOSURE – TRANSPORTATION NOISE SOURCES

Land Use	Outdoor Activity Areas[1] L_{dn}/CNEL, dB	Interior Spaces	
		L_{dn}/CNEL, dB	L_{EQ}, dB[2]
Residential (Except Temporary)	60 [3]	45	–
Bed and Breakfast, Hotels, Motels	60 [3]	45	–
Hospitals, Nursing and Personal Care	60 [3]	45	–
Public Assembly and Entertainment	–	–	35
Offices	60 [3]	–	45
Churches, Meeting Halls	–	–	45
Schools, Libraries, Museums	–	–	45
Outdoor Sports and Recreation	70	–	–

Source: SLO County 1992

Notes:

[1] *Where the location of outdoor activity areas is unknown, the exterior noise level standard shall be applied to the property line of the receiving land use.*

[2] *As determined for a typical worst-case hour during periods of use.*

[3] *For other than residential uses, where an outdoor activity area is not proposed, the standard shall not apply. Where it is not possible to reduce noise in outdoor activity areas to 60 dB L_{dn}/CNEL or less using a practical application of the best-available noise reduction measures, an exterior noise level of up to 65 dB L_{dn}/CNEL may be allowed.*

PROJECT IMPACTS AND MITIGATION MEASURES

Expose People to Noise Levels That Exceed the County Noise Ordinance Thresholds or General Plan Noise Elements (Threshold 1)

Short-Term Construction Noise

The operation of heavy equipment during the construction of infrastructure associated with future renewable energy facilities under the proposed project would result in temporary increases in noise in the immediate vicinity of individual construction sites. During construction,

noise from activities may intermittently dominate the noise environment in the immediate area of construction. Construction is performed in discrete steps, each of which has its own mix of equipment and consequently its own noise characteristics.

Typical construction noise levels vary up to a maximum of 95 dBA at 50 feet from the construction site during the noisiest construction phases. Site preparation activities for ground-mounted facilities, which include excavation and grading, tend to generate the highest noise levels because the noisiest construction equipment is earth-moving equipment. Earth-moving equipment includes excavating machinery such as backhoes, bulldozers, draglines, front loaders, and earth-moving and compacting equipment, which includes compactors, scrapers, and graders. Typical operating cycles for these types of construction equipment may involve 1 or 2 minutes of full power operation followed by 3 to 4 minutes at lower power settings. **Table 3.10-5** summarizes noise levels produced by construction equipment that is commonly used during construction projects.

TABLE 3.10-5
TYPICAL CONSTRUCTION NOISE LEVELS

Equipment	Noise Levels at 50 Feet
Front-End Loader	85 dBA
Bulldozer	85 dBA
Backhoe	80 dBA
Water Truck (or other heavy truck)	88 dBA
Generator	81 dBA
Concrete Mixer	85 dBA
Tamper/Roller	75 dBA
Crane, Mobile	83 dBA
Paver	87 dBA
Jackhammer	85 dBA
Grader/Excavator/ Scraper	85 dBA
Paver	85 dBA
Pile Driver (Impact/Vibratory)	95 dBA

Sources: FTA 2006; FHWA 2006a; EPA 1971

As shown in **Table 3.10-5**, maximum intermittent noise levels associated with construction equipment typically range from approximately 75 to 87 dBA L_{max} at 50 feet (L_{max} is the maximum A-weighted noise level recorded for a single noise). Pile driving, which is not often employed, exceeds the typical construction noise range, producing noise levels of approximately 95 dBA L_{max} at 50 feet.

Noise levels from point sources, such as construction sites, typically attenuate at a rate of about 6 dBA per doubling of distance (EPA 1971). Based on this attenuation rate and assuming a maximum noise level of approximately 95 dBA L_{eq} at 50 feet, average construction noise levels would be reduced to approximately 65 dBA L_{eq} at approximately 1,600 feet from a 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.

Long-Term Operational Noise

Future renewable energy facilities allowed under the proposed project could expose sensitive receptors to project-related noise, such as noise from electrical equipment located on-site, corona discharge noise from gen-tie lines, noise from horizontal trackers, and noise from vehicles, including vehicle maintenance. These noise levels could exceed County thresholds, depending on the location of future energy facilities, noise sources surrounding the project site, existing noise shielding, and other factors.

Impact 3-10-1 – Solar Construction and operations of proposed solar energy facilities could exceed maximum allowable noise levels established by the County. This impact is considered **less than significant (Class III)**.

Short-Term Construction Noise

Construction noise levels would be similar for both solar and wind installations, as well as for the construction of inverters and transformers, additional electrical equipment, interconnection or generation tie (gen-tie) lines, telecommunications equipment, switchgear buildings or structures, and security fencing. Construction noise typically occurs intermittently and varies depending on the nature or phase of construction (e.g., demolition and land clearing, grading and excavation, photovoltaic (PV) system installation, or wind turbine erection). Construction noise in any one particular area would be temporary and short term but would generate noise that could reach high levels for brief periods.

As previously demonstrated, the maximum intermittent noise levels associated with construction equipment typically range from approximately 75 to 87 dBA L_{max} at 50 feet, though pile driving, which is not often employed, exceeds the typical construction noise range, producing noise levels of approximately 95 dBA L_{max} at 50 feet. Potential noise impacts to sensitive receptors would vary depending on multiple factors, including the distance between construction activities and sensitive receptors. Nevertheless, such noise levels could exceed the maximum noise levels allowed under the San Luis Obispo County Noise Ordinance. However, noise sources associated with construction are exempt from the requirements of the County Noise Ordinance, provided such activities take place after 7:00 a.m. and before 9:00 p.m. on weekdays, or after 8:00 a.m. and before 5:00 p.m. on Saturdays or Sundays per County Code Section 22.10.120.A.

It is assumed that the majority of future construction activity would occur within these times. Any construction associated with future renewable energy facilities that would occur outside of these times would not be exempt from the requirements of the County Noise Ordinance and would therefore be required to demonstrate compliance. Compliance with the Noise Ordinance would be ensured by a site-specific noise analysis since this is the only way to

quantify noise levels and identify any necessary noise reduction mitigation. Since the County Code exempts construction activities from County noise requirements during times when most construction activity occurs, and any construction occurring outside of these times would need to demonstrate compliance with County noise requirements, construction-generated noise impacts would be less than significant.

Long-Term Operational Noise

Typical noise sources associated with solar facility operations and maintenance may include power inverters, tracking motors on individual panels, corona discharge noise from gen tie-lines, and maintenance vehicles and activities (such as panel cleaning and repairs). For Tier 1 through Tier 3 solar electric facility (SEF) projects, it is likely that up to 3 personnel would be required to service and maintain each facility.

Based on a review of noise assessments prepared for solar development projects in Southern California, a typical power inverter generates 66 dBA L_{eq} measured at a distance of 50 feet without an enclosure. Tracking motors that tilt an array of panels (if applicable) typically generate 38 dBA L_{eq} at 50 feet. Based on these levels, the only permanent source of noise of concern from Tier 1 through 3 SEFs is that generated from power inverter and other switchgear infrastructure. Such noise would attenuate approximately 6 dB per doubling of distance and could exceed the allowable hourly L_{eq} exterior noise standards if sited in proximity to residences. (The maximum allowable noise levels generated from stationary noise sources are 50 dBA L_{eq} in the daytime and 45 dBA L_{eq} during nighttime hours, as determined at the property line of the receiving land use.) However, County Noise Element Policy 3.3.5 states that noise from new stationary sources that will expose an existing noise-sensitive use to noise levels which exceed identified standards have to reduce noise levels to or below said standards.

Therefore, solar facilities in proximity to sensitive receptors would be required to reduce the noise levels emitted from all inverters and other on-site switchgear sources. This would most likely be achieved by enclosing inverters and other on-site switchgear sources and/or siting them at such a distance from noise-sensitive land uses as to ensure compliance with the established noise standards. Compliance with Noise Element Policy 3.3.5 would be ensured in the cases that sensitive receptors are present by a site-specific noise analysis since this is the only way to quantify noise levels and identify appropriate noise reduction measures if necessary. Noise Element Implementation Measure 4.6 states that if the County Planning Director determines that a noise-sensitive land use may be exposed to noise levels exceeding County standards, notwithstanding the noise contour information in the Noise Element, an acoustical analysis meeting established County requirements would be required.

Corona noise from interconnection lines would be nominal at the lower voltages (12 kilovolt (kV), 69 kV, etc.) required for solar installations of less than 20 MW. Corona noise from transmission lines at these voltages would be less than 40 dBA. Therefore, operational noise from any necessary interconnections would not exceed the allowable noise levels in the county.

For Tier 1 through Tier 3 SEF projects, it is likely that up to 3 personnel would be required to service and maintain each facility. Panel washing requirements and frequency would depend on technologies and site conditions, but typically would occur two to four times a year. Maintenance, panel washing, and cleaning of installations would be expected to generate peak noise levels of approximately 76 dBA L_{eq} at 50 feet (FHWA 2006b). While such noise levels could exceed the maximum noise levels allowed under the San Luis Obispo County Noise Ordinance, noise generated from maintenance activity, scheduled to occur as infrequently as

two to four times of year, would be associated with noise generated during construction activity due to the type of equipment involved and its temporary nature.

As previously stated, it is expected that such activity will occur within the hours of 7:00 a.m. to 9:00 p.m. on weekdays and 8:00 a.m. to 5:00 p.m. on Saturdays or Sundays, and County Code Section 22.10.120.A exempts this source of noise from County noise standards during these times. Any such activity that would occur outside of these times would not be exempt from the requirements of the County Noise Ordinance and would therefore be required to demonstrate compliance. Compliance with the Noise Ordinance would need to be ensured by a site-specific noise analysis since this is the only way to quantify noise levels and identity any necessary noise reduction mitigation.

For these reasons, this impact is considered to be **less than significant (Class III)**.

Impact 3-10-1 – Wind Construction and operations of proposed wind energy facilities could exceed maximum allowable noise levels established by the County. This impact is considered **less than significant (Class III)**.

Short-Term Construction Noise

As previously stated, construction noise levels would be similar for both solar and wind installations. While construction noise levels could exceed the maximum noise levels allowed under the San Luis Obispo County Noise Ordinance, noise sources associated with construction are exempt from the requirements of the County Noise Ordinance, provided such activities take place after 7:00 a.m. and before 9:00 p.m. on weekdays, or after 8:00 a.m. and before 5:00 p.m. on Saturdays or Sundays per Section 22.10.120.A of the County Code. As previously stated, all construction associated with future renewable energy facilities under the proposed project is expected to occur between these times.

Any such activity that would occur outside of these times would not be exempt from the requirements of the County Noise Ordinance and would therefore be required to demonstrate compliance. Compliance with the Noise Ordinance would need to be ensured by a site-specific noise analysis since this is the only way to identify noise levels and the appropriate noise reduction mitigation if necessary. Construction-generated noise impacts would be less than significant.

Long-Term Operational Noise

Wind energy conversion systems (WECS) generate two primary types of noise: aerodynamic noise from the turbine blades passing through the air and mechanical noise from the gears and other components of the generator. Along with the wind turbine noise, typical noise sources associated with wind facilities operations and maintenance include inverter and switchgear noise. Depending on the turbine model and the wind speed, aerodynamic noise can generate a whooshing or pulsing effect. Most noise radiates perpendicular to the blades' rotation. However, since turbines rotate to face the wind, they may radiate noise in different directions each day. Whether the turbine noise is intrusive depends not only on its distribution of amplitude and frequency but also on the ambient noise levels at the affected receptor (the maximum allowable noise levels generated from stationary noise sources are 50 dBA L_{eq} in the daytime and 45 dBA L_{eq} during nighttime hours, as determined at the property line of the receiving land use), which includes meteorological conditions (primarily wind noise).

The RESP only streamlines Tier 1 WECS projects in areas of the county zoned Agriculture (AG), Rural Lands (RL), Residential, Rural (RR), Commercial, Service (CS), Industrial (IND), Open Space (OS), or Public Facilities (PF). Operational noise from small turbines mounted on the roof of a conforming use would not generate any operational noise beyond the maximum allowed at the property line of receiving sensitive land uses. Domestic roof-mounted wind turbines are estimated to generate between 35 dB and 40 dB at the source (SEAI 2014; MWEA 2014). All on-site inverter and switchgear infrastructure from streamlined Tier 1 wind energy projects would be required to be enclosed or sited to ensure compliance with County Noise Element Policy 3.3.5, which states that noise from new stationary sources that will expose an existing noise-sensitive use to noise levels which exceed identified standards has to reduce noise levels to or below said standards. Therefore, WECS facilities streamlined under the RESP would not expose people to noise levels that exceed the County Noise Ordinance thresholds or Noise Element. This impact is considered to be **less than significant (Class III).**

Impact 3-10-1 – Policy Changes Implementation of the proposed RESP could result in changes to countywide policies that could expose people to noise levels that exceed the County Noise Ordinance thresholds or General Plan measures and policies. This impact is considered **less than significant (Class III)**.

Implementation of the proposed policy changes to the General Plan would enable streamlined reviews and approvals of SEF and WECS facility projects to be achieved either through the building permit process, zoning clearance process, or site plan review process. As described above, since most construction activities would be exempted from noise standards and solar and wind facilities in proximity to sensitive receptors would be required to reduce the noise levels as required by County Noise Element Policy 3.3.5, which states that noise from new stationary sources that will expose an existing noise-sensitive use to noise levels which exceed identified standards have to reduce noise levels to or below said standards, noise impacts would be **less than significant (Class III)**.

Generate Permanent Increases in the Ambient Noise Levels in the Project Vicinity (Threshold 2)

Future renewable energy facilities allowed under the proposed project could expose sensitive receptors to permanent noise increases, such as noise from electrical equipment located on-site, corona discharge noise from gen-tie lines, noise from horizontal trackers, and noise from vehicles, including vehicle maintenance.

Impact 3-10-2 – Solar Implementation of the proposed Program could generate permanent increases in the ambient noise levels in the project vicinity. This impact is considered **less than significant (Class III)**.

As discussed above under Threshold 1, based on a review of noise assessments prepared for solar development projects in Southern California, a typical power inverter generates 66 dBA L_{eq} measured at a distance of 50 feet without an enclosure. Tracking motors that tilt an array of panels (if applicable) typically generate 38 dBA L_{eq} at 50 feet. Based on these levels, the only permanent source of noise of concern from Tier 1 through 3 SEFs is that generated from power inverter and other switchgear infrastructure. Such noise would attenuate approximately 6 dB per doubling of distance and could exceed the allowable hourly L_{eq} exterior noise standards if sited in proximity to residences. (The maximum allowable noise levels generated from stationary noise sources are 50 dBA L_{eq} in the daytime and 45 dBA L_{eq} during nighttime hours, as determined at the property line of the receiving land use.)

However, County Noise Element Policy 3.3.5 states that noise from new stationary sources that will expose an existing noise-sensitive use to noise levels which exceed identified standards have to reduce noise levels to or below said standards. Therefore, solar facilities in proximity to sensitive receptors would be required to reduce the noise levels emitted from all inverters and other on-site switchgear sources. This would most likely be achieved by enclosing inverters and other on-site switchgear sources and/or siting them at such a distance from noise-sensitive land uses as to ensure compliance with the established noise standards. Compliance with Noise Element Policy 3.3.5 would be ensured in the cases that sensitive receptors are present by a site-specific noise analysis since this is the only way to quantify noise levels. Noise Element Implementation Measure 4.6 states that if the County Planning Director determines that a noise-sensitive land use may be exposed to noise levels that exceed County standards, notwithstanding the noise contour information in the Noise Element, an acoustical analysis meeting established County requirements would be required.

Corona noise from interconnection lines would be nominal at the lower voltages (12 kV, 69 kV, etc.) required for solar installations of less than 20 MW. Corona noise from transmission lines at these voltages would be less than 40 dBA. Therefore, operational noise from any necessary interconnections would not exceed the allowable noise levels in the county.

For Tier 1 through Tier 3 SEF projects, it is likely that up to 3 personnel would be required to service and maintain each facility. Panel washing requirements and frequency would depend on technologies and site conditions, but typically would occur two to four times a year. Maintenance, panel washing, and cleaning of installations would be expected to generate peak noise levels of approximately 76 dBA L_{eq} at 50 feet (FHWA 2006b). While such noise levels could exceed the maximum noise levels allowed under the San Luis Obispo County Noise Ordinance, noise generated from maintenance activity, scheduled to occur as infrequently as two to four times of year, would be associated with noise generated during construction activity due to the type of equipment involved and its temporary nature.

As previously stated, it is expected that such activity will occur within the hours of 7:00 a.m. to 9:00 p.m. on weekdays and 8:00 a.m. to 5:00 p.m. on Saturdays or Sundays, and County Code Section 22.10.120.A exempts this source of noise from County noise standards during these times. Any such activity that would occur outside of these times would not be exempt from the requirements of the County Noise Ordinance and would therefore be required to demonstrate compliance. Compliance with the Noise Ordinance would need to be ensured by a site-specific noise analysis since this is the only way to quantify noise levels and identity any necessary noise reduction mitigation.

This impact is **less than significant (Class III)**.

Impact 3-10-2 – Wind Implementation of the proposed Program could generate permanent increases in the ambient noise levels in the project vicinity. This impact is considered **less than significant (Class III)**.

As discussed above under Threshold 1, WECS generate two primary types of noise: aerodynamic noise from the turbine blades passing through the air and mechanical noise from the gears and other components of the generator. Along with the wind turbine noise, typical noise sources associated with wind facilities operations and maintenance include inverter and switchgear noise. Depending on the turbine model and the wind speed, aerodynamic noise can generate a whooshing or pulsing effect. Most noise radiates perpendicular to the blades' rotation. However, since turbines rotate to face the wind, they may radiate noise in different directions each day. Whether the turbine noise is intrusive depends not only on its distribution of amplitude

and frequency but also on the ambient noise levels at the affected receptor (the maximum allowable noise levels generated from stationary noise sources are 50 dBA L_{eq} in the daytime and 45 dBA L_{eq} during nighttime hours, as determined at the property line of the receiving land use), which includes meteorological conditions (primarily wind noise).

The RESP only streamlines Tier 1 WECS projects in areas of the county zoned AG, RL, RR, CS, IND, OS, or PF. Operational noise from small turbines mounted on the roof of a conforming use would not generate any operational noise beyond the maximum allowed at the property line of receiving sensitive land uses. Domestic roof-mounted wind turbines are estimated to generate between 35 dB and 40 dB at the source (SEAI 2014; MWEA 2014). All on-site inverter and switchgear infrastructure from streamlined Tier 1 wind energy projects would be required to be enclosed or sited to ensure compliance with County Noise Element Policy 3.3.5, which states that noise from new stationary sources that will expose an existing noise-sensitive use to noise levels which exceed identified standards has to reduce noise levels to or below said standards. Therefore, WECS facilities streamlined under the RESP would not expose people to noise levels that exceed the County Noise Ordinance thresholds or Noise Element. This impact is considered **less than significant (Class III).**

Impact 3-10-2 – Policy Changes Changes to countywide policies resulting from implementation of the proposed Program could result in permanent increases in the ambient noise levels in the project vicinity. This impact is considered **less than significant (Class III)**.

As described above, since construction activities would be exempted from noise standards and solar and wind facilities in proximity to sensitive receptors would be required to reduce the noise levels as required by County Noise Element Policy 3.3.5, which states that noise from new stationary sources that will expose an existing noise-sensitive use to noise levels which exceed identified standards have to reduce noise levels to or below said standards, noise impacts would be **less than significant (Class III)**.

Cause a Substantial Temporary Increase in Noise Levels (Threshold 2)

The operation of heavy equipment during the construction of infrastructure associated with future renewable energy facilities under the proposed project would result in temporary increases in noise in the immediate vicinity of individual construction sites. During construction, noise from activities may intermittently dominate the noise environment in the immediate area of construction. Construction is performed in discrete steps, each of which has its own mix of equipment and consequently its own noise characteristics. Typical construction noise levels vary up to a maximum of 95 dBA at 50 feet from the construction site during the noisiest construction phases. Site preparation activities for ground-mounted facilities, which include excavation and grading, tend to generate the highest noise levels because the noisiest construction equipment is earth-moving equipment. Earth-moving equipment includes excavating machinery such as backhoes, bulldozers, draglines, front loaders, and earth-moving and compacting equipment, which includes compactors, scrapers, and graders. Typical operating cycles for these types of construction equipment may involve 1 or 2 minutes of full power operation followed by 3 to 4 minutes at lower power settings.

Noise levels from point sources, such as construction sites, typically attenuate at a rate of about 6 dBA per doubling of distance (EPA 1971). Based on this attenuation rate and assuming a maximum noise level of approximately 95 dBA L_{eq} at 50 feet, average construction noise levels would be reduced to approximately 65 dBA L_{eq} at approximately 1,600 feet from a 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.

Impact 3-10-3 – Solar Implementation of the proposed Program could cause a temporary or periodic increase in ambient noise in the project vicinity. This impact is considered **less than significant (Class III)**.

Tier 1 SEF construction activities would include drilling, hammering, installation, and other activities, but they would be confined to the built environment footprint or a nearby laydown area. Rooftop construction would likely take one to two weeks, although the construction time and size of the workforce is directly related to the size of the roof and system. Temporary maximum noise levels during these activities are expected to range between 74 dBA to 88 dBA at 50 feet (FHWA 2006b).

Larger Tier 2 and Tier 3 solar facilities would require relatively flat sites, which may necessitate substantial grading depending on the existing topography. Thus, grubbing, clearing, and site grading is assumed across the entirety of an area required for Tier 2 and Tier 3 SEFs. Heavy equipment may also be required to construct foundations, panel mounts, and other on-site electrical infrastructure. The use of heavy equipment and larger site grading activities would typically generate maximum noise levels between 74 dBA to 88 dBA at 50 feet or approximately 83 dBA at 50 feet from the center of the equipment activity (FHWA 2006b). Such noise levels could exceed the maximum noise levels allowed under the San Luis Obispo County Noise Ordinance.

However, noise sources associated with construction are exempt from the requirements of the County Noise Ordinance, provided such activities take place after 7:00 a.m. and before 9:00 p.m. on weekdays or after 8:00 a.m. and before 5:00 p.m. on Saturdays or Sundays per Section 22.10.120.A of the County Code. It is expected that construction activity would occur within these times. Any construction associated with future renewable energy facilities that would occur outside of these times would not be exempt from the requirements of the County Noise Ordinance and would therefore be required to demonstrate compliance. Compliance with the Noise Ordinance would be ensured by a site-specific noise analysis since this is the only way to quantify noise levels and identify any necessary noise reduction mitigation. Since the County Code exempts construction activities from County noise requirements during times when most construction activity occurs, and any construction occurring outside of these times would need to demonstrate compliance with County noise requirements, construction-generated noise impacts would be **less than significant (Class III)**.

Impact 3-10-3 – Wind Implementation of the proposed Program could cause a temporary or periodic increase in ambient noise in the project vicinity. This impact is considered **less than significant (Class III)**.

Based on the types of construction activities associated with Tier 1 WECS projects, peak noise levels are expected to be approximately 76 dBA L_{eq} at 50 feet (FHWA 2006b). Such noise levels could exceed the maximum noise levels allowed under the San Luis Obispo County Noise

Ordinance. However, noise sources associated with construction are exempt from the requirements of the County Noise Ordinance, provided such activities take place after 7:00 a.m. and before 9:00 p.m. on weekdays, or after 8:00 a.m. and before 5:00 p.m. on Saturdays or Sundays per Section 22.10.120.A of the County Code. It is expected that the majority of future construction activity would occur within these times. Any construction associated with future renewable energy facilities that would occur outside of these times would not be exempt from the requirements of the County Noise Ordinance and would therefore be required to demonstrate compliance.

Compliance with the Noise Ordinance would be ensured by a site-specific noise analysis since this is the only way to quantify noise levels and identify any necessary noise reduction mitigation. Since the County Code exempts construction activities from County noise requirements during times when most construction activity occurs, and any construction occurring outside of these times would need to demonstrate compliance with County noise requirements, construction-generated noise impacts would be **less than significant (Class III)**.

Impact 3-10-3 – Policy Changes Implementation of the proposed Program could result in changes to countywide policies that could cause a temporary or periodic increase in ambient noise in the project vicinity. This impact is considered **less than significant (Class III)**.

As discussed above for solar and wind facilities, noise sources associated with construction are exempt from the requirements of the County Noise Ordinance, provided such activities take place after 7:00 a.m. and before 9:00 p.m. on weekdays or after 8:00 a.m. and before 5:00 p.m. on Saturdays or Sundays per Section 22.10.120.A of the County Code. It is expected that construction activity would occur within these times. Any construction associated with future renewable energy facilities that would occur outside of these times would not be exempt from the requirements of the County Noise Ordinance and would therefore be required to demonstrate compliance.

Compliance with the Noise Ordinance would be ensured by a site-specific noise analysis since this is the only way to quantify noise levels and identify any necessary noise reduction mitigation. Since the County Code exempts construction activities from County noise requirements during times when most construction activity occurs, and any construction occurring outside of these times would need to demonstrate compliance with County noise requirements, construction-generated noise impacts would be **less than significant (Class III)**.

Exposure of Persons to or Generation of Excessive Groundborne Vibration or Groundborne Noise Levels (Threshold 3)

The effects of ground vibration can vary from no perceptible effects at the lowest levels, to low rumbling sounds and detectable vibrations at moderate levels, to slight damage to nearby structures at the highest levels. At the highest levels of vibration, damage to structures is primarily architectural (e.g., loosening and cracking of plaster or stucco coatings) and rarely results in structural damage. The effects of ground vibration are influenced by the duration of the vibration and the distance from the vibration source.

There are no federal, state, or local regulatory standards for vibration. However, various criteria have been established to assist in the evaluation of vibration impacts. For instance, the California Department of Transportation (Caltrans) has developed vibration criteria based on human perception and structural damage risks. For most structures, Caltrans considers a peak-particle velocity (ppv) threshold of 0.2 inches per second to be the level at which architectural

damage (i.e., minor cracking of plaster walls and ceilings) to normal structures may occur. Below 0.10 inches per second, there is virtually no risk of architectural damage to normal buildings. In terms of human annoyance, continuous vibrations in excess of 0.1 inches per second ppv are identified by Caltrans as the minimum level perceptible level for ground vibration. Short periods of ground vibration in excess of 0.2 inches per second ppv can be expected to result in increased levels of annoyance to people in buildings (Caltrans 2002b).

Impact 3-10-4 – Solar Construction activity associated with the proposed Program could create groundborne vibration in discrete locations throughout the county. This impact is **less than significant** (**Class III**).

Typically, groundborne vibrations generated by man-made activities attenuate rapidly with distance from the source of the vibration. Man-made vibration issues are therefore usually confined to short distances (i.e., 500 feet or less) from the source (FTA 2006). While on-site construction equipment use (primarily grading activities) and heavy truck trips may produce short-term groundborne vibration, such vibration would only be of concern at any existing sensitive receptor structures located within 500 feet of the source.

County Code Section 22.10.170.A states that any land use conducted in or within one-half mile of an urban or village reserve line needs to be operated so as to not produce detrimental earthborne vibrations perceptible at or beyond the boundary of the industrial land use producing the vibration source. Exceptions to this standard include vibrations from construction and the demolition of structures, between 7:00 a.m. and 9:00 p.m., and vibrations from moving sources such as trucks and railroads. Any construction associated with future renewable energy facilities that would occur outside of these times would not be exempt from the requirements of Section 22.10.170.A and would therefore be required to demonstrate compliance.

Compliance with the Section 22.10.170.A would be ensured by a site-specific noise analysis since this is the only way to quantify groundborne vibration levels and identify any necessary noise reduction mitigation. Since the County Code exempts construction activities from Section 22.10.170.A during times when most construction activity occurs, and any construction occurring outside of these times would need to demonstrate compliance with County requirements, potential groundborne vibration impacts would be **less than significant (Class III)**.

Impact 3-10-4 – Wind Construction activity associated with the proposed Program could create groundborne vibration in discrete locations throughout the county. This impact is **less than significant** (**Class III**).

As previously stated, County Code Section 22.10.170.A states that any land use conducted in or within one-half mile of an urban or village reserve line needs to be operated so as to not produce detrimental earthborne vibrations perceptible at or beyond the boundary of the industrial land use producing the vibration source. Exceptions to this standard include vibrations from construction and the demolition of structures, between 7:00 a.m. and 9:00 p.m., and vibrations from moving sources such as trucks and railroads. Any construction associated with future renewable energy facilities that would occur outside of these times would not be exempt from the requirements of Section 22.10.170.A and would therefore be required to demonstrate compliance.

Compliance with Section 22.10.170.A would be ensured by a site-specific noise analysis since this is the only way to quantify groundborne vibration levels and identify any necessary noise

reduction mitigation. Since the County Code exempts construction activities from Section 22.10.170.A during times when most construction activity occurs, and any construction occurring outside of these times would need to demonstrate compliance with County requirements, potential groundborne vibration impacts would be **less than significant (Class III)**.

Impact 3-10-4 – Policy Changes Implementation of the proposed Program could result in changes to countywide policies that could cause create groundborne vibration in discrete locations throughout the county. This impact is considered **less than significant (Class III)**.

As discussed above for solar and wind facilities, noise sources associated with construction are exempt from the requirements of the County Noise Ordinance, provided such activities take place after 7:00 a.m. and before 9:00 p.m. per Section 22.10.170.A of the County Code. It is expected that construction activity would occur within these times. Any construction associated with future renewable energy facilities that would occur outside of these times would not be exempt from the requirements of Section 22.10.170.A and would therefore be required to demonstrate compliance. Compliance with Section 22.10.170.A would be ensured by a site-specific noise analysis since this is the only way to quantify groundborne vibration levels and identify any necessary noise reduction mitigation.

Since the County Code exempts construction activities from Section 22.10.170.A during times when most construction activity occurs, and any construction occurring outside of these times would need to demonstrate compliance with County requirements, potential groundborne vibration impacts would be **less than significant (Class III)**.

If Located Within the Airport Review Designation or Adjacent to a Private Airstrip, Expose People Residing or Working in the Project Area to Severe Noise Levels (Threshold 4)

Paso Robles Municipal Airport is located north of State Route 46 in the North County Planning Area. Camp San Luis Obispo Airfield and San Luis Obispo County Regional Airport are located in the San Luis Obispo Planning Area.

Impact 3-10-5 – Solar Implementation of the proposed Program could result in structures located within the Airport Review designation or adjacent to a private airstrip, exposing people residing or working in the project area to severe noise levels. This impact is considered **less than significant (Class III)**.

No projects identified in the RESP 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 project does not propose any changes in air traffic patterns. In terms of workers, it is likely that up to 3 personnel would be required to service and maintain each facility for Tier 1 through Tier 3 SEF projects. Activities such as panel washing requirements and frequency would depend on technologies and site conditions, but typically would occur two to four times a year. Due to the infrequency of worker activity, workers would not be exposed to severe noise levels from aircraft. For these reasons, **less than significant (Class III)** impacts due to aircraft operations and related noise levels would occur.

Impact 3-10-5 – Wind Implementation of the proposed Program could result in structures located within the Airport Review designation or adjacent to a private airstrip, exposing people residing or working in the project area to severe noise levels. This impact is considered **less than significant (Class III)**.

No projects identified in the RESP 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 project does not propose any changes in air traffic patterns. For these reasons, **less than significant (Class III)** impacts due to aircraft operations and related noise levels would occur.

Impact 3-10-5 – Policy Changes Implementation of the proposed Program could result in structures located within the Airport Review designation or adjacent to a private airstrip, exposing people residing or working in the project area to severe noise levels. This impact is considered **less than significant (Class III)**.

No projects identified in the RESP 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 project does not propose any changes in air traffic patterns. For these reasons, **less than significant (Class III)** impacts due to aircraft operations and related noise levels would occur.

CUMULATIVE IMPACTS

Renewable energy projects streamlined by the RESP would primarily generate noise during construction. Potential cumulative noise impacts to sensitive receptors would vary depending on multiple factors, including the distance between construction activities and sensitive receptors, the size of the construction project, and the number of construction projects occurring in the same vicinity at the same time.

Noise sources associated with construction are exempt from the requirements of the County Noise Ordinance, provided such activities take place after 7:00 a.m. and before 9:00 p.m. on weekdays or after 8:00 a.m. and before 5:00 p.m. on Saturdays or Sundays per Section 22.10.120.A of the County Code. It is expected that future construction activity would occur within these times. Any construction associated with future renewable energy facilities that would occur outside of these times would not be exempt from the requirements of the County Noise Ordinance and would therefore be required to demonstrate compliance. Compliance with the Noise Ordinance would be ensured by a site-specific noise analysis since this is the only way to quantify cumulative noise levels and identify any necessary noise reduction mitigation.

As discussed above under Threshold 1, County Noise Element Policy 3.3.5 states that noise from new stationary sources that will expose an existing noise-sensitive use to noise levels which exceed identified standards have to reduce noise levels to or below said standards. Therefore, solar facilities in proximity to sensitive receptors would be required to reduce the noise levels emitted from all inverters and other on-site switchgear sources.

Domestic roof-mounted wind turbines would also be required to ensure compliance with County Noise Element Policy 3.3.5. In addition, County Noise Element Policy 3.3.6 states that the County shall consider implementing additional mitigation measures where new development may result in cumulative increases of noise on noise-sensitive land uses. The County enforces compliance with all County noise standards through Noise Element Implementation Measure 4.6, which states that if the County Planning Director determines that a noise-sensitive land use may be exposed to noise levels that exceed County standards, notwithstanding the noise contour information in the Noise Element, an acoustical analysis meeting established County requirements would be required. Overall, the Program would not result in significant noise impacts and similarly would not result in a considerable contribution to a cumulative noise impact.

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3.11 Water Resources

This section addresses the potential environmental impacts of the proposed Program related to water resources, including drinking water supply, water quality, surface water runoff, drainage patterns, groundwater impacts, and flooding risk. The existing surface water and groundwater hydrologic conditions in the county are characterized, and a summary is provided of relevant laws and regulations as they apply to the proposed Program.

3.11.1 PHYSICAL SETTING

San Luis Obispo County is located within the southern portion of Coast Ranges Geomorphic Province (Coast Ranges), which encompass northwest-trending mountain ranges and valleys that are roughly parallel to the Great Central Valley and the Sierra Nevada range. The county is divided into three broad physiographic regions: a coastal plain, coastal mountains and valleys, and interior mountains and valleys. The county is bordered by the Temblor Range to the east and the Sierra Madre Mountains to the south. The Carrizo Plain is located in the southwestern portion of the county. California is divided into ten hydrologic regions. San Luis Obispo County is located in the Central Coast Hydrologic Region. It is subject to the objectives and limits of the Central Coast Regional Water Quality Control Board's (2011) Water Quality Control Plan for the Central Coastal Basin (Basin Plan).

Climate in the county varies with distance from the coast but is generally temperate, with mild winters and hot, dry summers. Average annual precipitation ranges from 9.85 inches (Shandon) to 32.85 inches (San Simeon), with the majority of precipitation occurring between October and April (SLO County 2014a).

Hydrologic regions are subdivided into hydrologic units (HU). The county includes ten hydrologic units, but is largely covered by only five of those: the Carrizo Plain HU, the Estero Bay HU, the Estrella River HU, the Salinas HU, and the Santa Maria HU. Hundreds of streams and creeks flow throughout the county, of which 186 are named. Major streams, from north to south, include Nacimiento River, Salinas River, San Luis Obispo Creek, Arroyo Grande Creek, Cuyama River, and Santa Maria River.

There are 24 groundwater basins in San Luis Obispo County, six of which extend into adjoining counties. About half of the groundwater basins in the county are small and found along the coast. Major groundwater basins, containing a substantial amount of water, include Carrizo Plain, Cuyama Valley, Salinas Valley, and Santa Maria. The largest groundwater basin both in physical size and storage is the Paso Robles Area Subbasin of the Salinas Valley Groundwater Basin (see **Figure 3.11-1**). The County Master Water Report (MWR) (SLOFCWCD 2012) divided the county into three subregions—North Coast, South Coast, and Inland—and further subdivided these regions into Water Planning Areas, or WPAs. The WPAs represent the geographical organization of the county. Water demand, agricultural water needs, sources of supply, and other information are organized by WPA. The Master Water Report identified 16 WPAs organized in a way intended to recognize important hydrogeologic units or water management areas throughout the county.

TABLE 3.11-1
SAN LUIS OBISPO GROUNDWATER BASINS

Subregion	WPA	Basin Name	Subbasin/Area
North Coast	1	San Carpoforo Valley Basin	
		Arroyo de la Cruz Valley Basin	
		Pico Creek Valley Basin	
	2	San Simeon Valley Basin	
		Santa Rosa Valley Basin	
		Villa Valley Basin	
	3	Cayucos Valley Basin	
		Old Valley Basin	
		Toro Valley Basin	
	4	Morro Valley Basin	
		Chorro Valley Basin	
	5	Los Osos Valley Basin	
South Coast	6	San Luis Obispo Valley Basin	San Luis Valley Subbasin
			Avila Valley Subbasin
	7		Edna Valley Subbasin
		Santa Maria Valley Basin	Pismo Creek Valley Subbasin
			Arroyo Grande Valley Subbasin
			Nipomo Valley Subbasin
			Northern Cities Management Area
			Nipomo Mesa Management Area
			Santa Maria Valley Management Area
	8	Huasna Valley Basin	
	9	Cuyama Valley Basin	
Inland	10	Carrizo Plain Basin	
	11	Rafael Valley Basin	
		Big Spring Area Basin	
	12	Santa Margarita Valley Basin	
		Rinconada Valley Basin	
		Pozo Valley Basin	
	13	Paso Robles Basin	Atascadero Subbasin
	14		Paso Robles (main basin area)
	15	Cholame Valley Basin	
	16	(none)	Nacimiento

WATER QUALITY

The Central Coast Regional Water Quality Control Board (RWQCB) defines beneficial uses for many of the surface water and groundwater resources in the county. Water quality can be stated in terms of whether there is water of sufficient quantity or quality to protect or enhance beneficial uses. These beneficial uses are protected or enhanced through water quality objectives, which are "achieved primarily through the establishment of waste discharge requirements and through implementation of [the] water quality control plan" (Central Coast RWQCB 2011). Tables 2-1 and 2-2 in the Basin Plan list the beneficial uses for surface water in the county. Each beneficial use is accompanied by a water quality objective as defined in the Basin Plan. In addition to water quality objectives, the Basin Plan defines total maximum daily load (TMDL) requirements to protect water quality from non-point source pollution.

Water Quality in Surface Water

Surface waters in San Luis Obispo County are affected by point and non-point sources of pollution. Major potential sources of pollution include sewage treatment plants, septic systems, agricultural livestock operations, mining, farming, oil and gas production, and urban stormwater runoff. Water quality issues for surface water include fecal coliform, boron, low dissolved oxygen, nitrates, pathogens, metals, and nutrients, such as nitrogen and phosphorus. Under Section 303(d) of the Clean Water Act, states must list waterbodies that exceed the established TMDL for a given contaminant. These waterbodies must be listed as impaired. In San Luis Obispo County, the following waterbodies have been identified as impaired: Atascadero Creek, Cholame Creek, Chorro Creek, Chumash Creek, Dairy Creek, Los Osos Creek, Morro Bay, Nacimiento Reservoir, Nipomo Creek, Oso Flaco Creek, Pennington Creek, the Upper Salinas River, San Bernardo Creek, San Luis Obispo Creek, San Luisito Creek, the Santa Maria River, and Walters Creek (SLOFCWCD 2011) (see **Figure 3.11-2**).

Water Quality in Groundwater

Water quality issues related to groundwater in the inland areas of the county include mineral leaching, high nitrate levels found in wells in the Morro Bay, Los Osos, Cuyama Community Services District, and Arroyo Grande Valley regions, high selenium levels found in wells in the Oceano Community Services District, and high total dissolved solids (TDS) found in wells in the Atascadero, Carrizo, and Santa Maria Valley regions. In addition, wells in the Nipomo area are being treated for high concentrations of iron and manganese (SLOFCWCD 2011).

Water Supply

Groundwater supplies approximately 60 percent of water demand within the county, while surface water supplies the remaining 40 percent (SLO County 2007a). In San Luis Obispo County, drinking water sources include rivers, lakes, streams, reservoirs, and wells. The California Department of Water Resources (DWR) owns and operates the State Water Project (SWP). In 1963, the San Luis Obispo County Flood Control and Water Conservation District contracted with the DWR for 25,000 acre-feet per year (AFY) of SWP water. The SWP began delivering water to the Central Coast in 1997 upon completion of the Coastal Branch conveyance and treatment facilities, serving Santa Barbara and San Luis Obispo counties. The SWP is considered a supplementary source of water supply since hydrologic variability, maintenance schedules, and repair requirements can cause reduced deliveries or complete shutdown of the delivery system. Since delivery to the Central Coast began, the SWP has provided between 50 and 100 percent of the contracted allocations, but recently drought coupled with pumping restrictions in

consideration of endangered species habitat lowered that amount to 35 percent in 2008 and 40 percent in 2009 (SLOFCWCD 2012).

Surface Water

Reservoirs that collect surface water supply approximately 40 percent of the water demand in San Luis Obispo County (SLO County 2007a). The Nacimiento Water Project, which includes Lake Nacimiento Reservoir, supplies 9,655 AFY to the City of Paso Robles, the Templeton Community Services District, the City of San Luis Obispo, the Atascadero Mutual Water Company, and County Service Area (CSA) 10 A. The Whale Rock Reservoir supplies 40,660 AFY to the City of San Luis Obispo, California Polytechnic State University, SLO (Cal Poly), and the California Men's Colony. Lopez Lake and Reservoir supply 4,530 AFY to the City of Pismo Beach, the Oceano Community Services District, the City of Grover Beach, the City of Arroyo Grande, and CSA 12. Twitchell Reservoir supplies approximately 32,000 AFY of recharge to the Santa Maria Valley Groundwater Basin. The reservoir is managed for flood control and groundwater recharge. In addition, the San Luis Obispo County Flood Control and Water Conservation District contracted with the California Department of Water Resources for 25,000 AFY of water supply from the State Water Project (SLOFCWCD 2011). As previously noted, the SWP has provided between 50 and 100 percent of the contracted allocations, but recently drought coupled with pumping restrictions in consideration of endangered species habitat lowered that amount to 35 percent in 2008 and 40 percent in 2009 (SLOFCWCD 2012).

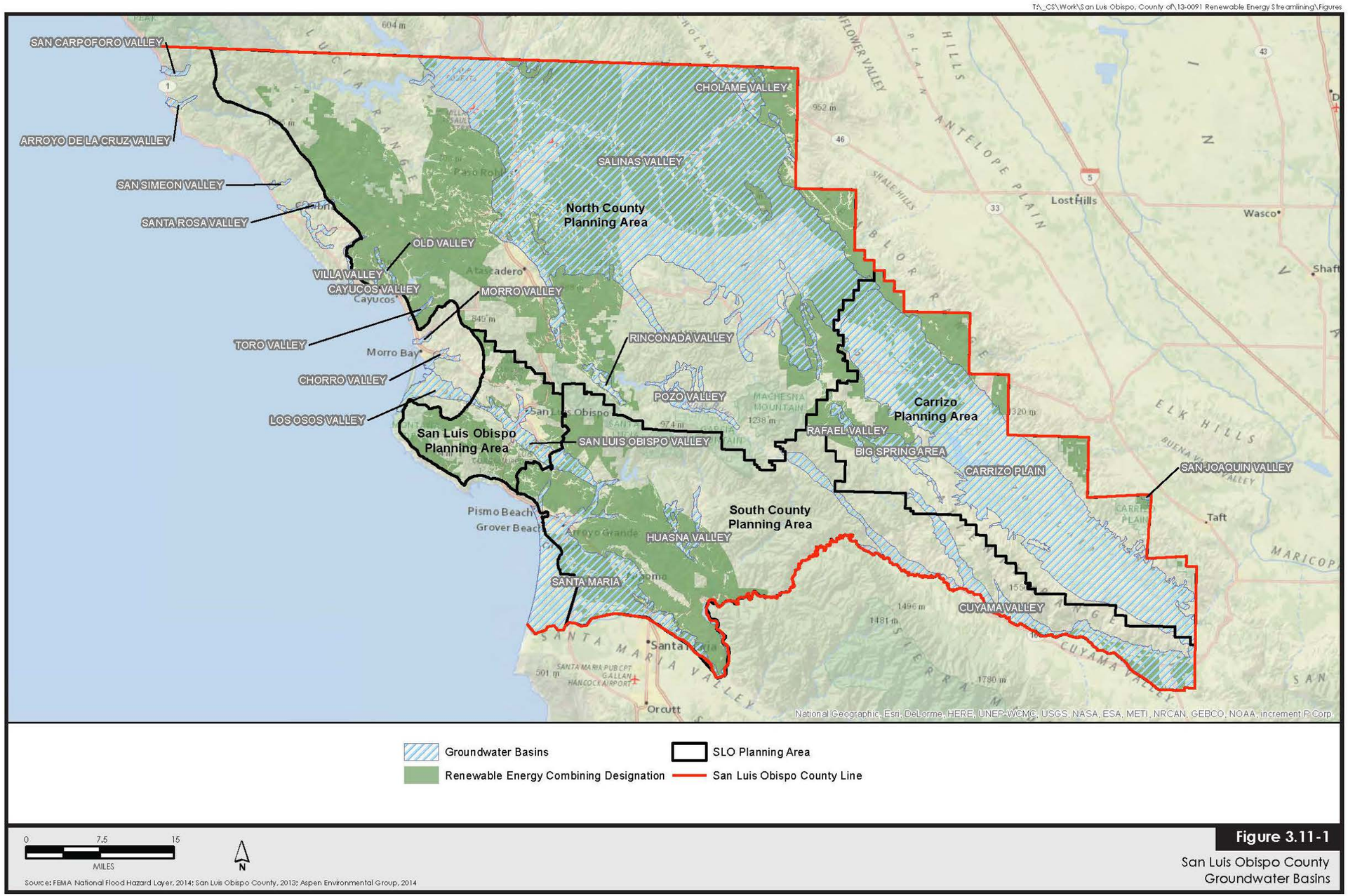

Figure 3.11-1
San Luis Obispo County Groundwater Basins

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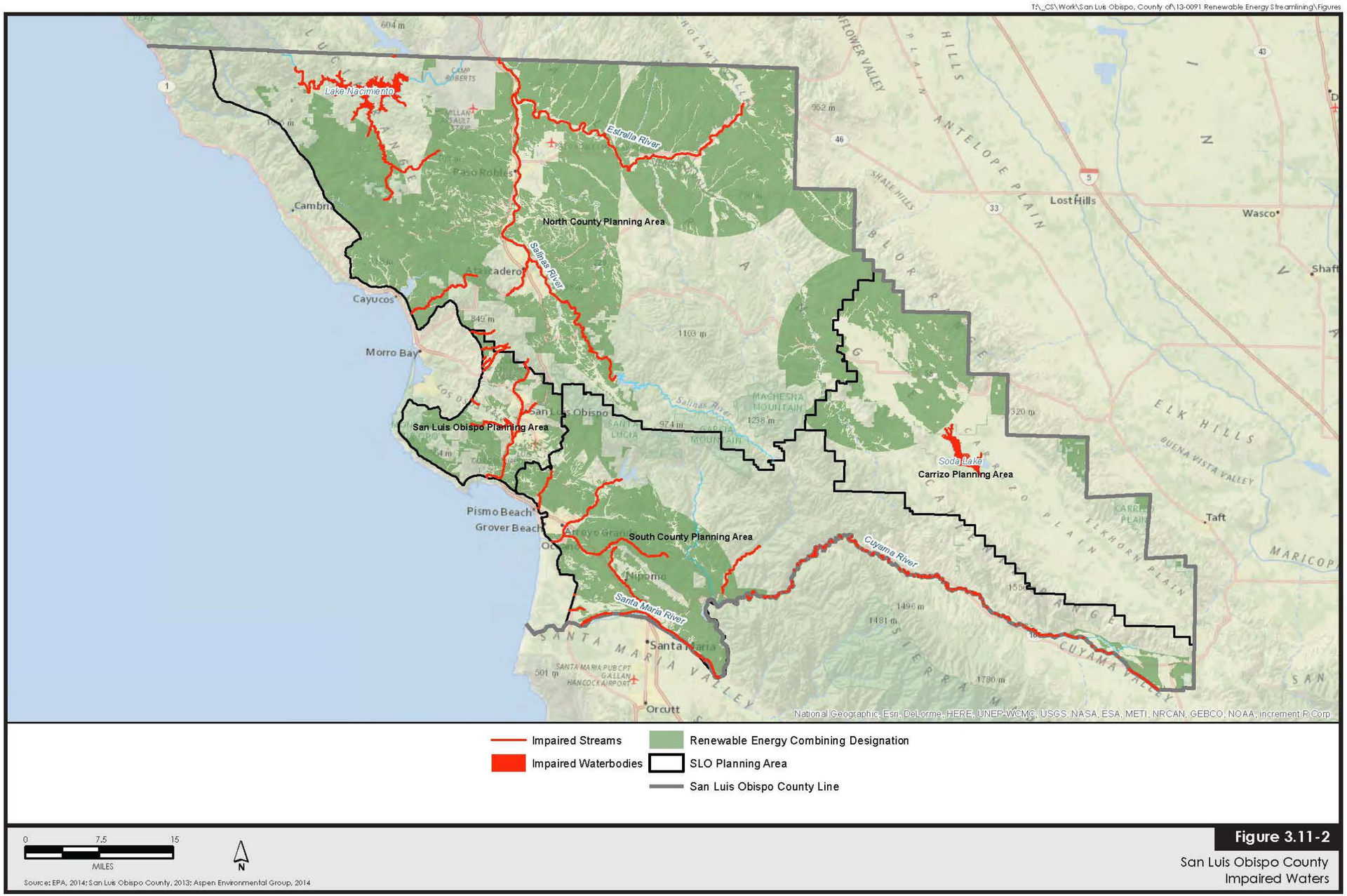

Figure 3.11-2
San Luis Obispo County Impaired Waters

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Groundwater

Groundwater supplies 60 percent of water demand in San Luis Obispo County (SLO County 2007a). The County Resource Management System (RMS), an informational document, provides a biennial assessment of the county's natural and man-made resources, including an assessment on the main groundwater basins and water delivery systems. This public document helps decision-makers make more informed decisions about resource and infrastructure issues. The RMS uses three alert levels regarding water availability, called Level of Severity (LOS):

- LOS I – The first alert level occurs when sufficient lead time exists either to expand the capacity of the resource or to decrease the rate at which the resource is being depleted. For water supply, LOS I occurs when the water demand over the next nine years equals or exceeds the estimated dependable supply.
- LOS II – The second alert level occurs at the point at which some moderation of the rate of resource use must occur to prevent exceeding the resource capacity. For water supply, LOS II occurs when projected water demand over the next seven years equals or exceeds the estimated dependable supply.
- LOS III – The third alert level occurs when the demand for the resource equals or exceeds its supply and is the most critical level of concern. For water supply, LOS III occurs when projected water demand equals or exceeds the estimated dependable supply.

Per the 2012 biennial report, water supply was found sufficient to meet demand in most of the areas evaluated. The RMS Resources Summary Report makes a distinction between "recommended" levels of severity and levels of severity that have been "certified" by the County Board of Supervisors. The Board of Supervisors has certified a LOS III alert level for the Paso Robles Groundwater Basin, the Nipomo Mesa Water Conservation Area, and the Los Osos Groundwater Basin. In addition, the following groundwater basins, Community Services Districts (CSDs), or County Service Areas have a recommended LOS II or III: Santa Margarita Groundwater (LOS III), Cambria CSD (LOS III), CSA 10A (LOS II), Garden Farms County Water District (LOS II), San Miguel CSD (LOS II), San Simeon CSD (LOS III), CSA 23 (LOS III), and Templeton CSD (LOS II) (SLO County 2013b).

Community Water Service Providers

Community Service Districts are citizen-elected governmental agencies with administrative and fiscal independence, charged to provide specific services such as hospitals, sewerage, water, and fire protection. There are nine such CSDs in San Luis Obispo County (a total of 37 private mutual water purveyors are active today in the county). **Table 3.11-2** presents the forecast demand and available supply of CSDs in the county.

TABLE 3.11-2
COMMUNITY SERVICE DISTRICTS: FORECAST DEMAND AND AVAILABLE SUPPLY IN ACRE-FEET PER YEAR (AFY)

Community Service District	Forecast Demand at County Buildout	Available Supply
Avila Beach CSD	162–170 AFY	134 AFY
Cambria CSD	1,009–1,514 AFY	1,748 AFY
Heritage Ranch CSD	935–1,039 AFY	1,100 AFY
Los Osos CSD	835–1,044 AFY	1,110 AFY
Nipomo CSD	2,948 AFY	2,698 AFY
Oceano CSD	1,277–1,419 AFY	1,598 AFY
San Miguel CSD	466–582 AFY	235 AFY
San Simeon CSD	250 AFY	140 AFY
Templeton CSD	2.034–2,260 AFY	1,932 AFY

Source: SLOFCWCD 2012

Flood Hazards

In August 2008, the Federal Emergency Management Agency (FEMA) released Flood Insurance Rate Maps (FIRM) for San Luis Obispo County. FEMA Flood Hazard Zones are depicted on **Figure 3.11-3.** Flood Hazard Zones are located primarily along the northern coastal regions of the county, around Morro Bay and Pismo Beach, in the Cholame Valley, in the Shandon Valley, near Arroyo Grande, and in the vicinity of Soda Lake in the Carrizo Plain (SLO County 2014b).

Stormwater Discharge

Pollutants found in stormwater include sediments, nutrients, pathogens, petroleum, hydrocarbons, heavy metals, pesticides, herbicides, and trash. These pollutants can have damaging effects on both human health and aquatic ecosystems. Impervious surfaces prevent infiltration of stormwater. Urbanized portions of the county have a higher concentration of these surfaces, in addition to having a higher concentration of land uses that increase the presence of household and industrial chemicals, vehicles, and commercial products, all of which result in an increase in pollutants to receiving waters.

The US Environmental Protection Agency (EPA) and the State Water Resources Control Board (SWRCB) require stormwater management plans (SWMPs) and stormwater pollution prevention plans (SWPPPs) to comply with the National Pollutant Discharge Elimination System (NPDES). Dischargers whose projects disturb 1 or more acres of soil, or whose projects disturb less than 1 acre but are part of a larger common plan of development that in total disturbs 1 or more acres, are required to obtain coverage under the General Permit for Discharges of Storm Water Associated with Construction Activity (Construction General Permit Order 2009-0009-DWQ). Construction activity subject to this permit includes clearing, grading and disturbances to the ground such as stockpiling, or excavation, but does not include regular maintenance activities performed to restore the original line, grade, or capacity of the facility. The Construction General Permit requires the development and implementation of a SWPPP.

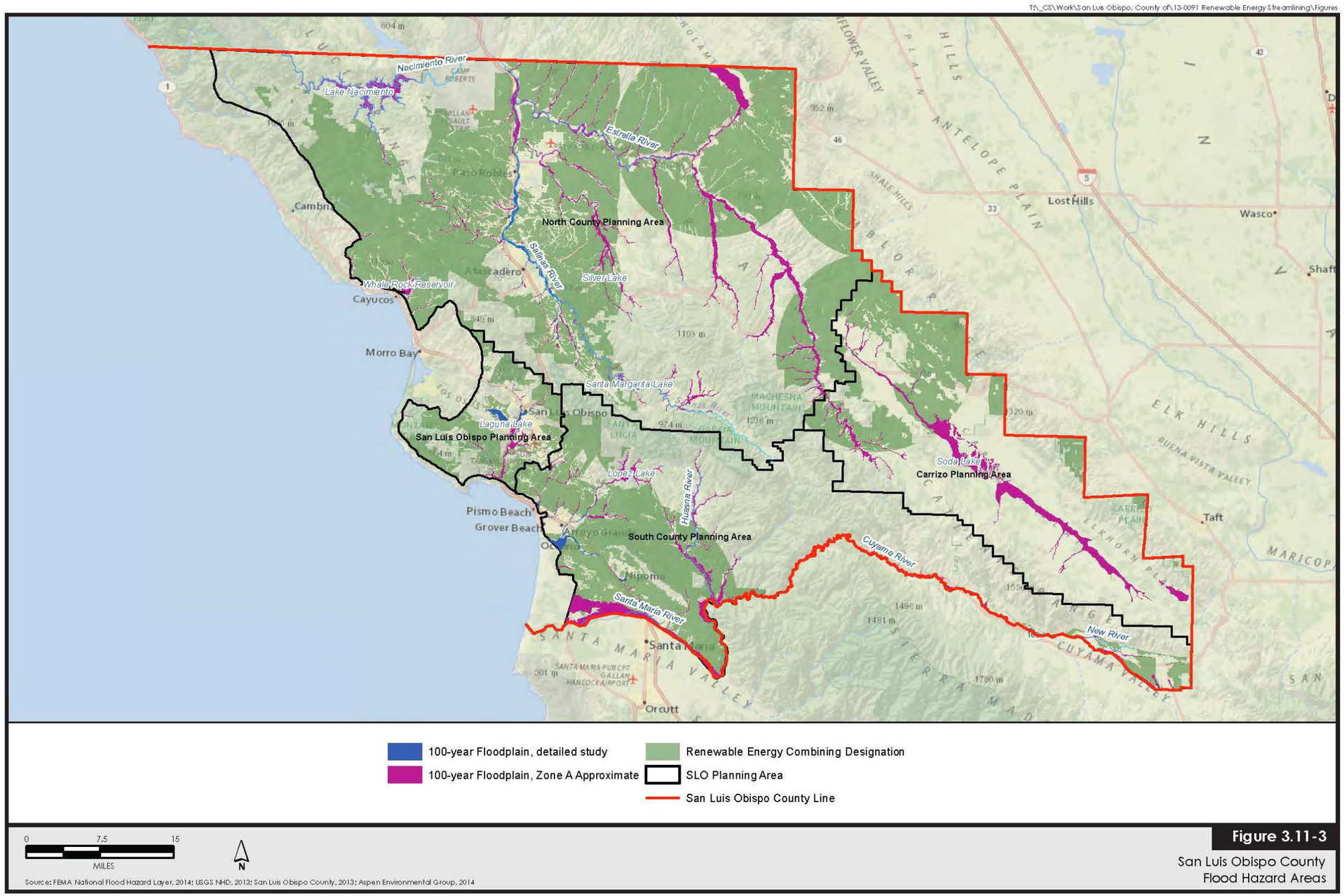

Figure 3.11-3
San Luis Obispo County
Flood Hazard Areas

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CARRIZO PLANNING AREA

Water Quality

As previously stated, the County Master Water Report (MWR) (SLOFCWCD 2012) divided the county into three subregions—North Coast, South Coast, and Inland—and further subdivided these regions into Water Planning Areas, or WPAs. The WPAs represent the geographical organization of the county. Water demand, agricultural water needs, sources of supply, and other information are organized by WPA. The Master Water Report identified 16 WPAs organized in a way intended to recognize important hydrogeologic units or water management areas throughout the county. Water quality testing in WPA10, which is contained in the Carrizo Planning Area, reveals high total dissolved solids (TDS) and high concentrations of nitrates in some wells. With treatment, groundwater is usable for drinking purposes (SLOFCWCD 2011).

Water Supply

The planning area has no surface water sources of water supply. The main surface water feature in the area is Soda Lake, a closed depression, alkaline lake. The primary groundwater supplies in the Carrizo Planning Area include the Carrizo Plain and the Rafael and Big Spring Valley groundwater basins. There are no CSDs in the planning area.

Flood Hazards

In August 2008, FEMA released Flood Insurance Rate Maps (FIRM) for San Luis Obispo County. FEMA Flood Hazard Zones are depicted on **Figure 3.11-3**. Within the Carrizo Planning Area, Flood Hazard Zones are located primarily in the Carrizo Plain area in the vicinity of Soda Lake (SLO County 2014b).

Stormwater Discharge

Phase I and Phase II of the NPDES program regulate the water quality of stormwater discharge. No communities in the Carrizo Planning Area are subject to NPDES Phase I or II requirements. The planning area also has no stormwater discharge facilities.

NORTH COUNTY PLANNING AREA

The North County Planning Area includes the following WPAs: WPA 3 Cayucos, WPA 12 Santa Margarita, WPA 13 Atascadero/Templeton, WPA 14 Salinas/Estrella, WPA 15 Cholame, and WPA 16 Nacimiento. The incorporated cities in this planning area are the cities of Atascadero and Paso Robles. In addition to these municipal consumptive uses, agriculture and rural users account for the remaining water demand profile in this planning area (SLOFCWCD 2012).

Water Quality

In WPA 12 Santa Margarita, TDS concentrations are relatively high. Total coliform and fecal coliform levels in shallow and deep aquifer wells suggest possible impacts from local wastewater disposal systems. However, these tests are not conclusive (SLOFCWCD 2011).

Water Supply

WPA 16 Nacimiento receives surface water from Lake Nacimiento (SLOFCWCD 2012). The primary groundwater supplies include the Santa Margarita, Rinconada, and Pozo Valley groundwater basins and the Santa Margarita Creek Alluvial Aquifer, the Paso Robles Formation, the Atascadero Subbasin, and the Cholame Valley groundwater basin. The County Board of Supervisors has certified LOS III status for the Paso Robles Groundwater Basin due to the high levels of drawdown that have occurred in this basin (SLO County 2013b). Heritage Ranch CSD is located in WPA 16 Nacimiento, San Miguel CSD is located in WPA 14 Salinas Estrella, and Templeton CSD is located in WPA 13 Atascadero/Templeton (SLOFCWCD 2012).

Flood Hazards

FEMA Flood Hazard Zones are depicted on **Figure 3.11-3**. Flood Hazard Zones are located primarily in the Cholame Valley and Shandon Valley areas (SLO County 2014b).

Stormwater Discharge

Under Phase 1 of the NPDES program, the cities of Paso Robles and Atascadero maintain stormwater discharge facilities. Under NPDES Phase II, the unincorporated areas in the Atascadero/Paso Robles region are required to maintain stormwater discharge facilities.

SAN LUIS OBISPO PLANNING AREA

The San Luis Obispo Planning Area includes WPA 6 San Luis Obispo/Avila. The city of San Luis Obispo is the main population center in this planning area. In addition to municipal consumptive uses, the remaining water demand profile consists of Cal Poly, agriculture, and rural water users (SLOFCWCD 2012).

Water Quality

Surface water and groundwater quality in the San Luis Obispo Planning Area is found to meet acceptable standards for drinking water (SLOFCWCD 2011).

Water Supply

The primary surface water sources for the planning area include the State Water Project, Whale Rock Reservoir, the Salinas Reservoir, the Lopez Lake Reservoir, and the Nacimiento Water Project (SLOFCWCD 2012).

The primary groundwater supplies in this basin include the San Luis Obispo Valley basin, Los Osos Valley basin, Chorro Valley basin, San Luis Valley subbasin, and Avilla Valley subbasin. These basins encompass an area of approximately 13,800 acres. The safe yield of both groundwater basins is approximately 6,000 AFY (SLOFCWCD 2012). The Avila Beach Community Services District is located in the San Luis Obispo Planning Area (SLOFCWCD 2012).

Flood Hazards

FEMA Flood Hazard Zones are depicted on **Figure 3.11-3**. Flood Hazard Zones are located primarily in the Los Osos Valley (SLO County 2014b).

Stormwater Discharge

Under Phase 1 of the NPDES program, the City of San Luis Obispo maintains a stormwater discharge facility. Under Phase II, the urban fringe of San Luis Obispo is required to maintain stormwater discharge facilities.

SOUTH COUNTY PLANNING AREA

The South County Planning Area includes WPA 7 South Coast, WPA 8 Huasna Valley, and WPA 9 Cuyama Valley. The main population center in this planning area is Arroyo Grande. In addition to municipal consumptive uses, the remaining water demand profile consists of agriculture and rural users (SLOFCWCD 2012).

Water Quality

Two wells in WPA 7 South Coast are being treated for high levels of iron and manganese. In WPA 9 Cuyama Valley, due to heavy agricultural water use, water from shallow wells has high nitrate concentrations, and some wells contain arsenic at relatively high levels, approaching the maximum contaminant level of 50 parts per billion (ppb) (SLOFCWCD 2011).

Water Supply

The primary sources of surface water include the State Water Project and Lopez Lake Reservoir. A potential water supply project is the Nipomo Supplemental Water Project to be administered by the Nipomo CSD. There are no other CSDs controlling water supply systems in the South County Planning Area.

The primary groundwater supplies in the planning area include the Edna, Pismo Creek, and Arroyo Grande Valley subbasins, the Santa Maria Valley Groundwater Basin, the Pismo Formation, the Huasna Valley Groundwater Basin, and the Cuyama Valley Groundwater Basin, which extends into adjacent counties (SLOFCWCD 2012).

Flood Hazards

FEMA Flood Hazard Zones are depicted on **Figure 3.11-3**. Flood Hazard Zones are located primarily in the Huasna Valley along the Santa Maria River, Arroyo Grande Valley, Pismo Creek, and Cuyuma Valley (SLO County 2014b).

Stormwater Discharge

Under Phase II of the NPDES program, the community of Nipomo is required to maintain a stormwater discharge facility.

3.11.2 REGULATORY SETTING

FEDERAL

Clean Water Act

The Clean Water Act (CWA) (33 USC Section 1251 et seq.), formerly the Federal Water Pollution Control Act of 1972, was enacted with the intent of restoring and maintaining the chemical,

physical, and biological integrity of the waters of the United States. The CWA establishes the basic structure for regulating discharges of pollutants into the waters of the United States and has given the Environmental Protection Agency (EPA) the authority to implement pollution control programs. The CWA requires states to set standards to protect, maintain, and restore water quality through the regulation of point source and certain non-point source discharges to surface water. Those discharges are regulated by the National Pollutant Discharge Elimination System (NPDES) permit process (CWA Section 402). In California, NPDES permitting authority is delegated to, and administered by, the nine Regional Water Quality Control Boards (RWQCBs). San Luis Obispo County is within the jurisdiction of the Central Coast RWQCB.

Section 401 of the CWA requires that any activity, including river or stream crossing during road, pipeline, or transmission line construction, which may result in discharges into a state waterbody must be certified by the RWQCB. This certification ensures that the proposed activity does not violate state and/or federal water quality standards. The limits of non-tidal waters extend to the ordinary high water line, defined as the line on the shore established by the fluctuation of water and indicated by physical characteristics, such as natural line impressed on the bank, changes in the character of the soil, and presence of debris. The US Army Corps of Engineers (USACE) may issue either individual, site-specific permits or general, nationwide permits for discharge into waters of the United States.

Section 404 of the Clean Water Act establishes programs to regulate the discharge of dredged and fill material in waters of the United States, including wetlands. When an application for a Section 404 permit is made, the applicant must show it has taken steps to avoid impacts to wetlands or waters of the United States where practicable, minimized unavoidable impacts on waters of the United States and wetlands, and provided mitigation for unavoidable impacts.

CWA Section 404 requires a permit for construction activities involving the placement of dredged any kind of or fill material into waters of the United States or wetlands. A Water Quality Certification pursuant to CWA Section 401 is required for most Section 404 permit actions. If applicable, construction would also require a request for Water Quality Certification (or waiver thereof) from the Central Coast RWQCB.

Section 303(d) of the CWA (33 USC 1250, et seq., at 1313(d)) requires states to identify "impaired" waterbodies as those which do not meet water quality standards. States are required to compile this information in a list and submit the list to the EPA for review and approval. This list is known as the Section 303(d) list of impaired waters. As part of this listing process, states are required to prioritize waters and watersheds for future development of TMDL requirements. The SWRCB and RWQCBs have ongoing efforts to monitor and assess water quality, to prepare the Section 303(d) list, and to develop TMDL requirements.

National Flood Insurance Program

San Luis Obispo County is a participant in the National Flood Insurance Program (NFIP), a federal program administered by FEMA. Participants in the NFIP must satisfy certain mandated floodplain management criteria. The National Flood Insurance Act of 1968 has adopted, as a desired level of protection, an expectation that developments should be protected from floodwater damage of the Intermediate Regional Flood (IRF). The IRF is defined as a flood that has an average frequency of occurrence on the order of once in 100 years, although such a flood may occur in any given year.

STATE

Porter-Cologne Water Quality Control Act

The State Water Resources Control Board regulates water quality through the Porter-Cologne Water Quality Act of 1969, which contains a complete framework for the regulation of waste discharges to both surface waters and groundwater of the state. On the regional level, the proposed Program falls under the jurisdiction of the Central Coast Regional Water Quality Control Board, which is responsible for the implementation of state and federal water quality protection statutes, regulations, and guidelines. The Central Coast RWQCB (2011) has developed a Water Quality Control Plan (Basin Plan) to show how the quality of the surface waters and groundwater in the region should be managed to provide the highest water quality reasonably possible. The Basin Plan lists the various beneficial uses of water in the region, describes the water quality that must be maintained to allow those uses, describes the programs, projects, and other actions that are necessary to achieve the standards established in this plan, and summarizes plans and policies to protect water quality.

California Fish and Game Code

Section 1602 of the California Fish and Game Code protects the natural flow, bed, channel, and bank of any river, stream, or lake designated by the California Department of Fish and Wildlife (CDFW) in which there is, at any time, any existing fish or wildlife resources, or benefit for the resources. Section 1602 applies to all perennial, intermittent, and ephemeral rivers, streams, and lakes in the state and requires any person, state or local governmental agency or any public utility to notify the CDFW before beginning any activity that will:

- Substantially divert or obstruct the natural flow of any river, stream, or lake.
- Substantially change or use any material from the bed, channel, or bank of, any river, stream, or lake.
- 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.

During final engineering and design of any project associated with the proposed Renewable Energy Streamlining Program (RESP or Program), if it is determined that any project-related actions would have the potential to necessitate a Streambed Alteration Agreement, such an agreement would be prepared and implemented prior to construction of the proposed Program, thus maintaining compliance with Section 1602 of the California Fish and Game Code. A Streambed Alteration Agreement is required if the CDFW determines the activity could substantially adversely affect an existing fish and wildlife resource. The agreement includes measures to protect fish and wildlife resources while conducting the project. The CDFW must comply with the California Environmental Quality Act (CEQA) before it may issue a final Lake or Streambed Alteration Agreement; therefore, the CDFW must wait for the lead agency to fully comply with CEQA before it may sign the draft Lake or Streambed Alteration Agreement, thereby making it final.

California Water Code Section13260

California Water Code Section 13260 requires that any person discharging waste, or proposing to discharge waste, in any region that could affect the quality of the waters of the State, other than into a community sewer system, submit a report of waste discharge to the applicable Regional Water Quality Control Board. Any actions related to the proposed Program that would

be applicable to California Water Code Section13260 would be reported to the Central Coast RWQCB.

LOCAL

San Luis Obispo County Land Use Ordinance – Title 22

The County's Land Use Ordinance (LUO) provides standards to protect water quality and site new development away from hazards. Standards are provided in multiple sections of the LUO, as described below.

LUO – Flood Hazard (FH) Combining Designation

Section 22.14.060 identifies the County's Flood Hazard Area (FH) Combining Designation. The combining designation's purpose is to address areas with a potential for 100-year frequency floods or to minimize the effects of new development on drainage ways and watercourses. Areas within the FH Combining Designation are subject to additional permit and processing requirements. Applications must include Federal Insurance Administration flood data. Construction standards for the FH Combining Designation seek to minimize risks through location and design measures.

LUO – Grading and Drainage Standards

Chapter 22.52 establishes the County's grading and drainage requirements. This chapter seeks to reduce the effects of stormwater runoff and encourage groundwater recharge. Projects subject to the chapter must include groundwater recharge elements and comply with the County's Low Impact Development Handbook standards.

Generally, grading permits are required for projects moving more than 50 cubic yards of earthwork, activity within a watercourse that involves the movement of more than 20 cubic yards, or removal of more than 1 acre of vegetation. Drainage plans are also required for projects that increase runoff volume or velocity or with specified conditions.

LUO – Planning and Community Area Standards

Articles 8 and 9 of Title 22 provide standards for specific communities and sub-areas related to water and drainage. Drainage standards apply to designated areas near bluffs. Additional setbacks from waterways or riparian areas also apply to specified land use designations and areas. In the Paso Robles Groundwater Basin, Community Planning Area standards (Article 9) identify that all discretionary permits are to include offset requirements for new water demand.

San Luis Obispo County Integrated Regional Water Management Plan

The County's (2007c) San Luis Obispo Integrated Regional Water Management Plan (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. For example, by integrating groundwater recharge and ecosystem preservation and restoration with flood control and stormwater management projects, the impacts of urbanization stemming from paving of natural landscapes can be minimized or even reversed. At the time of EIR preparation, the County is preparing an update to the IRWMP.

San Luis Obispo County Master Water Report

The purpose of the Master Water Report (MWR) is to summarize current and future water resource management activities in the county (SLOFCWCD 2012). The MWR includes information on water sources, groundwater basin levels, and water users. It summarizes information from the numerous local and subregional water management studies and reports. Recommendations in the MWR identify the San Luis Obispo Flood Control and Water Conservation District's plan to improve water supply to meet existing and future demands.

County of San Luis Obispo Stormwater Management Program

The County's (2007b) Stormwater Management Program is a comprehensive program developed and administered by the Engineering Division as a requirement of Phase II of the NPDES program. The program comprises various elements and activities designed to reduce stormwater pollution to the maximum extent practicable (MEP) and to eliminate prohibited non-stormwater discharges in accordance with federal and state laws and regulations.

San Luis Obispo County General Plan – Land Use and Circulation Element

The Land Use and Circulation Element (LUCE) policies address land use and transportation, including the protection of water resources. LUCE policies facilitate the protection of natural resources such as watersheds, water supply, and riparian areas.

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

The Conservation and Open Space Element (COSE) provides a comprehensive water policy for the unincorporated county. Specifically, the element's Water Resource chapter integrates the County's IRWMP with the water supply and land use planning issues of the General Plan. Policies seek to conserve water, protect water quality and supply, protect groundwater for agriculture, and limit the water use of new development.

San Luis Obispo County General Plan – Agriculture Element

The Agriculture Element recognizes the importance of water resources for the county's agricultural industry. This element includes policies that protect water for agricultural use.

San Luis Obispo County General Plan – Land Use and Circulation Element and Resource Management System

The Land Use and Circulation Element establishes the County's Resource Management System (RMS). The RMS serves as an information tool for the LUCE to monitor five resources including water. The purpose of the RMS is to provide information that guides decisions for balancing land development with natural resources.

The RMS identifies when resources achieve levels of severity established in the Land Use and Circulation Element. Three levels of severity are used to identify levels of resource deficiencies. Once a resource has achieved a level of severity, corrective actions are triggered to address resource capacity and enact conservation measures. Once every two years, County staff prepares a Resource Management System Biennial Summary to monitor resource levels. Action requirements triggered by the levels of severity are only enacted upon certification by the County Board of Supervisors. Policies in the LUCE and COSE reference levels of severity to guide

decision-making. Once the Board has certified groundwater and water supply levels of severity, policies impose new limitations on development.

Summary of Local Regulations and Policies

Table 3.11-3 summarizes regulations and policies from the documents described above that address water and hydrology, including General Plan elements, the Land Use Ordinance, and other regulations. Information is organized by planning area.

TABLE 3.11-3
LOCAL POLICIES AND REGULATIONS FOR WATER AND HYDROLOGY ISSUES

Code or Policy Section	Summary
Countywide	
Title 22, Chapter 22.52	Grading permit is required for all projects moving more than 50 cubic yards of earthwork, work in a watercourse, or removal of more than 1 acre of vegetation. Agricultural accessory structures are exempt. Permit application must include a stormwater pollution prevention plan, sedimentation plan, and grading plan that demonstrates grading will not accelerate erosion or sedimentation. Standards in Section 22.52.150 include limitations on grading near watercourses, drainage standards, and flood-proofing measures.
Title 22, Section 22.14.060	Applications for projects within the Flood Hazard Area (FH) must provide Federal Insurance Administration flood data and comply with additional construction standards to minimize flood risk.
Title 22, Section 22.52.040	Low Impact Development (LID) handbook requirements are imposed on all construction and grading projects.
Title 22, Section 22.52.110	Drainage plan is required for projects increasing or decreasing runoff, involving land disturbance of more than 20,000 square feet, resulting in impervious surface of more than 20,000 square feet, located within a Flood Hazard (FH) Combining Designation, located within 100 feet of any watercourse in USGS maps, involves development on slopes steeper than 10%, or is subject to other pond or drainage conditions.
Title 22, Section 22.52.120	Erosion and sedimentation plans are required for construction and grading projects proposed within 100 feet of a watercourse, or other site disturbance activities.
Title 22, Section 22.52.130	Stormwater pollution prevention plan (SWPPP) required for all construction and grading permit projects or for projects resulting in site disturbance of more than once acre of land or part of a project encompassing more than one acre of site disturbance.
Agriculture Element, Policy AG 2.b	Agricultural (AG) land use designation or used for production agriculture: Conserve the soil and water that are the vital components necessary for a successful agricultural industry.
Agriculture Element, Policy AG P10	Agricultural (AG) land use designation or used for production agriculture: Encourage water conservation best management practices.
Agriculture Element, Policy AG P11.a	Agricultural (AG) land use designation or used for production agriculture: Maintain water resources for production agriculture, both in quality and quantity, so as to prevent the loss of agriculture due to competition for water with urban and suburban development.
Agriculture Element, Policy AG P11.b	Agricultural (AG) land use designation or used for production agriculture: Do not approve proposed General Plan amendments or rezonings that result in increased residential density or urban expansion if the subsequent development would adversely affect: (1) water supplies and quality, or (2) groundwater recharge capability needed for agricultural use.

Code or Policy Section	Summary
Conservation and Open Space Element, Policy BR 4.1	Protect streams and riparian vegetation to preserve water quality and flood control functions and associated fish and wildlife habitat. a. Require preservation of natural streams and associated riparian vegetation in an undisturbed state to the greatest extent feasible in order to protect banks from erosion, enhance wildlife passageways, and provide natural greenbelts b. Include stream and riparian corridors as part of a network of wildlife corridors. c. Protect steam corridors and setback areas through easements or dedications. d. Protect the needs of wildlife when watercourse alteration is undertaken, explore alternatives to alteration, and assure that stream diversion structures protect habitats. (Implementation Strategy BR 4.1.1)
Conservation and Open Space Element, Policy BR 4.2	Minimize the impacts of public and private development on streams and associated riparian vegetation due to construction, grading, resource extraction, and development near streams. • Set back development on public lands and all private development subject to discretionary review a minimum of 50 feet from the top of the bank of any stream or outside the dripline of riparian vegetation, whichever distance is greater. Limitations are imposed on grading within the setback, limiting the alteration of riparian vegetation, and habitat protection with Low Impact Strategies. (Implementation Strategy BR 4.2.1)
Conservation and Open Space Element, Policy BR 4.4	Promote use and maintenance of engineered, vegetated treatment systems such as constructed wetlands, vegetated swales, or vegetated filter strips where they will reduce nonpoint source pollution from private and public development.
Conservation and Open Space Element, Policy BR 4.7	Contamination from the use of commercial, residential, and public application of pesticides and herbicides into all inland and coastal waters, including but not limited to rivers, streams, wetlands, and intertidal areas, shall be eliminated.
Conservation and Open Space Element, Policy BR 4.9	Encourage all landowners and pesticide applicators to consult with agencies such as the Natural Resources Conservation Service, UC Cooperative Extension, and Resource Conservation Districts to (1) reduce pesticide use, explore use of integrated pest management, (2) consider environmental impacts in choosing pesticides, and (3) otherwise reduce contamination of surface water and groundwater from pesticides.
Conservation and Open Space Element, Policy BR 5.1	Require development to avoid wetlands and provide upland buffers. • Require development applications to include wetland delineation for sites with jurisdictional wetlands and wetlands that support rare, threatened, or endangered species and to demonstrate compliance with these wetlands policies, standards, and criteria, and with state and federal regulations. (Implementation Strategy BR 5.1.1)
Conservation and Open Space Element, Policy BR 5.2	Ensure that all public and private projects avoid impacts to wetlands if feasible. If avoidance is not feasible, ensure no net loss of wetlands, consistent with state and federal regulations and this element. • For projects subject to discretionary review: (1) require a report from a qualified biologist to determine the extent of wetlands, potential impacts of the project and recommended mitigation measures, and (2) minimize impacts to wetlands through measures such a clustering development, low impact development (LID) and use of vegetated swales. (Implementation Strategy BR 5.2.1)
Conservation and Open Space Element, Policy BR 5.1	Require development to avoid wetlands and provide upland buffers.
Conservation and Open Space Element, Policy BR 5.2	Ensure that all public and private projects avoid impacts to wetlands if feasible. If avoidance is not feasible, ensure no net loss of wetlands.

Code or Policy Section	Summary
Conservation and Open Space Element, Policy BR 5.3	Avoid the conversion of wetlands, including vernal pools, except where grazing may improve the health and function of those wetlands. Where grazing occurs in and around wetlands and vernal pools, encourage grazing management that improves the health and function of those wetlands.
Conservation and Open Space Element, Policy BR 6.1	Require all proposed discretionary land use projects and land divisions to avoid impacts to freshwater and saltwater fisheries and wildlife habitat to the maximum extent feasible. When avoidance is not feasible, offset potential losses of fisheries and wildlife. • Prohibit construction activities within the channel of any waterway identified to contain existing or potential spawning habitat for special-status fish species during periods of spawning activities. (Implementation Strategy BR 6.1.1)
Conservation and Open Space Element, Policy BR 7.4	Support efforts on public and private lands to keep Chorro Creek, Los Osos Creek, and other watercourses free of excessive sediment and other pollutants to maintain freshwater flow into the Morro Bay National Estuary and the Monterey Bay National Marine Sanctuary, nurture steelhead trout, and support other plant and animal species. • Implement provisions of total maximum daily loads (TMDLs) as they are developed for Chorro Creek, Los Osos Creek, and the Morro Bay estuary, and other watersheds consistent with the requirements of the Regional Water Quality Control Board. (Implementation Strategy BR 7.4.1)
Conservation and Open Space Element, Policy SL 2.1	Give high priority to protecting watersheds, aquifer-recharge areas, and natural drainage systems when reviewing applications for discretionary development.
Conservation and Open Space Element, Policy WR 1.13	Do not approve General Plan amendments or land divisions that increase the density or intensity of nonagricultural uses in rural areas that have a recommended or certified Level of Severity II or III for water supply until a Level of Severity I or better is reached, unless there is an overriding public need.
Conservation and Open Space Element, Policy WR 1.14	Groundwater basins with Levels of Severity II or III Severity: Avoid a net increase in nonagricultural water use in groundwater basins that are recommended or certified as Level of Severity II or III for water supply.
Conservation and Open Space Element, Policy WR 1.3	Use existing water resources before securing new supplies.
Conservation and Open Space Element, Policy WR 1.6	Protect water sources for water-dependent species and the continuity of riparian communities.
Conservation and Open Space Element, Policy WR 1.8	Limit the use of surface water projects only to development in existing urban and village reserve lines.
Conservation and Open Space Element, Implementation Strategy WR 2.2.4	Require all discretionary land use permits for new non-agricultural uses in groundwater basins with a Level of Severity of I, II, or III to monitor and report annual water use.
Conservation and Open Space Element, Policy WR 3.1	Take actions to prevent water pollution, consistent with federal and state water policies and standards, including but not limited to the federal Clean Water Act, Safe Drinking Water Act, and National Pollutant Discharge Elimination System (NPDES).
Conservation and Open Space Element, Policy WR 3.2	Protect watersheds, groundwater and aquifer recharge areas, and natural drainage systems from potential adverse impacts of development projects.

Code or Policy Section	Summary
Conservation and Open Space Element, Policy WR 4.7	Require Low Impact Development (LID) practices in all discretionary projects.
Conservation and Open Space Element, Policy WR 6.4	Assure that proposed development integrates ecosystem enhancement, drainage control, and natural recharge as applicable.
Economic Element, Policy 1.3	Balance the capacity for growth with the efficient use or reuse of available resources (energy, land, water, infrastructure) and reasonable acquisition of new resources.
Land Use and Circulation Element, Principle 1, Policy 3	Preserve and sustain important water resources, watersheds, and riparian habitats.
Carrizo Planning Area	
No additional policies or regulations for the Carrizo Planning Area.	
North County Planning Area	
Title 22, Section 22.94.025	Discretionary permits in the Paso Robles Groundwater Basin shall require offset requirements for new water demand.
Shandon Community Plan, Appendix D EIR Mitigation Measures, BIO-1(b)	Requires setbacks, buffers, and avoidance for wetland habitats, or mitigations if impacts cannot be avoided. Designated infill parcels are exempt.
San Luis Obispo Planning Area	
No additional policies or regulations for the San Luis Obispo Planning Area.	
South County Planning Area	
Title 8, Section 8.92.030	Requires retrofitting to water efficient fixtures prior to sale of property in the Nipomo Mesa Water Conservation Area.
Title 19, Section 19.07.042.D	New structures or structures receiving substantial retrofits in the Nipomo Mesa Water Conservation Area shall be required to install water-efficient fixtures as specified.
Title 22, Article 9, 22.108.040.A.4-5	In the Nipomo area: Additional drainage and creek protection measures for new development.
Title 22, Article 9, 22.98.070.H	In the South County sub-area: Additional standards for runoff on the Nipomo Mesa edge to accommodate a 100-year storm.

3.11.3 IMPACTS AND MITIGATION MEASURES

THRESHOLDS OF SIGNIFICANCE

A water resources impact is considered significant if implementation of the RESP would result in any of the following:

1) Violate any water quality standards.

2) 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 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).

3) Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, in a manner which would result in substantial erosion or siltation on- or off-site.

4) Create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide additional sources of polluted runoff.

5) Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, or substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or off-site.

6) Place within a 100-year flood hazard area structures which would impede or redirect flood flows.

7) Expose people to a risk of loss, injury, or death involving flooding (e.g., dam failure) or inundation by seiche, tsunami, or mudflow.

8) Require or result in the construction of new water treatment facilities or expansion of existing facilities, the construction of which could cause significant environmental issues.

While the county contains several large publicly owned dams, as well as a number of smaller privately owned dams, these dams are under the jurisdiction of the State of California Division of Safety of Dams (DSD), which performs annual maintenance inspections of these and other dams under state jurisdiction, including monitoring for compliance with seismic stability standards. Regular inspection by the DSD ensures that dams are kept in safe operating condition. As such, failure of these dams is considered to have an extremely low probability of occurring and is not considered to be a reasonably foreseeable event. For these reasons, the Program would not expose people or structures to a significant risk of loss, injury, or death as a result of the failure of a dam.

No impact would occur and this issue will not be further discussed in this EIR. The potential for impacts due to tsunami and seiche are considered low throughout the county since there are no lakes large enough to produce substantial seiche events. While coastal regions would be most susceptible to tsunami, the Program boundaries do not include the Coastal Zone. Therefore, there would no impact associated with tsunamis or seiches and these issues will not be discussed further.

PROJECT IMPACTS AND MITIGATION MEASURES

Violate Any Water Quality Standards (Threshold 1)

Impact 3-11-1 – Solar Implementation of the proposed Program could indirectly violate water quality standards. This impact is considered **less than significant (Class III)**.

Short-Term Construction

The State Water Resources Control Board (SWRCB) is responsible for implementing the Clean Water Act and has issued a statewide General Permit (Water Quality Order 2009-0009-DWQ) for construction activities in the state. At renewable energy facility construction sites in the county,

the Construction General Permit (CGP) is implemented and enforced by the Central Coast Regional Water Quality Control Board (RWQCB). In accordance with the requirements of the CGP, prior to construction of the ground-mounted solar energy facilities larger than 1 acre, a risk assessment must be prepared and submitted to the Central Coast RWQCB to determine the project's risk level and associated water quality control requirements. These requirements will, at a minimum, include the preparation and implementation of a stormwater pollution prevention plan (SWPPP) identifying specific best management practices to be implemented and maintained on the site in order to comply with the applicable narrative effluent standards.

The best management practices (BMPs) that must be implemented as part of a SWPPP can be grouped into two major categories: (1) erosion and sediment control BMPs; and (2) non-stormwater management and materials management BMPs. Erosion and sediment control BMPs fall into four main subcategories:

- Erosion controls
- Sediment controls
- Wind erosion controls
- Tracking controls

Erosion controls include practices to stabilize soil, to protect the soil in its existing location, and to prevent soil particles from migrating. Examples of erosion control BMPs are preserving existing vegetation, mulching, and hydroseeding. Sediment controls are practices to collect soil particles after they have migrated, but before the sediment leaves the site. Examples of sediment control BMPs are street sweeping, fiber rolls, silt fencing, gravel bags, sand bags, storm drain inlet protection, sediment traps, and detention basins. Wind erosion controls prevent soil particles from leaving the site in the air. Examples of wind erosion control BMPs include applying water or other dust suppressants to exposed soils on the site. Tracking controls prevent sediment from being tracked off-site via vehicles leaving the site to the extent practicable. A stabilized construction entrance not only limits the access points to the construction site but also functions to partially remove sediment from vehicles prior to leaving the site.

Non-stormwater management and material management controls reduce non-sediment-related pollutants from potentially leaving the construction site to the extent practicable. The CGP prohibits the discharge of materials other than stormwater and authorized non-stormwater discharges (such as irrigation water and pipe flushing and testing water). Non-stormwater BMPs tend to be management practices with the purpose of preventing stormwater from coming into contact with potential pollutants. Examples of non-stormwater BMPs include preventing illicit discharges and implementing good practices for vehicle and equipment maintenance, cleaning, and fueling operations, such as using drip pans under vehicles. Waste and materials management BMPs include implementing practices and procedures to prevent pollution from materials used on construction sites. Examples of materials management BMPs include:

- Good housekeeping activities such as storing of materials covered and elevated off the ground, in a central location.
- Securely locating portable toilets away from the storm drainage system and performing routine maintenance.
- Providing a central location for concrete wash-out and performing routine maintenance.
- Providing several dumpsters and trash cans throughout the construction site for litter/floatable management.

- Covering and/or containing stockpiled materials and overall good housekeeping on the site.
- The CGP also requires that construction sites be inspected before and after storm events and every 24 hours during extended storm events. The purpose of the inspections is to identify maintenance requirements for the BMPs and to determine the effectiveness of the BMPs that are being implemented. The SWPPP is a "living document" and as such can be modified as construction activities progress. Additional requirements include compliance with post-construction standards focusing on preparation of Rain Event Action Plans.
- The SWRCB has also issued a statewide General Permit (Water Quality Order R5-2008-0081, NPDES No. CAG995001) for dewatering and other low-threat discharges to surface waters in the state. Should construction of the proposed project require dewatering of encountered groundwater, the project proponent would be required to submit a Notice of Intent, as well as a Best Management Practices Plan, to comply with the General Permit. The BMP Plan would include disposal practices to ensure compliance with the General Permit such as the use of sediment basins or traps, dewatering tanks, or gravity or pressurized bag filters. Monitoring and reporting would also be performed to ensure compliance with the permit.

In addition, County Conservation and Open Space Element Policy 4.2 seeks to minimize the impacts of development on streams and associated riparian vegetation due to construction or grading near streams by requiring a setback of a minimum of 50 feet from the top of the bank of any stream or outside the dripline of riparian vegetation, whichever distance is greater. Grading is prohibited within the setback in most circumstances. County Code Title 22, Section 22.52.120 states that erosion and sedimentation plans are required for construction and grading projects, projects proposed within 100 feet of a watercourse, or other site disturbance activities.

Compliance with the requirements of the SWRCB statewide general permits for construction and dewatering as well as the County Conservation and Open Space Element and the County Code would ensure that water quality degradation during the construction phase of projects proposed under the Program would be less than significant.

Long-Term Operations

Runoff from solar energy generation facilities could include oils, grease, fuel, antifreeze, and byproducts of combustion (such as lead, cadmium, nickel, and other metals), as well as sediment, herbicides, and other pollutants. Precipitation during the early portion of the wet season displaces these pollutants into the stormwater runoff, resulting in high pollutant concentrations in the initial wet weather runoff.

County Conservation and Open Space Element Policy 4.2 seeks to minimize the impacts of development on streams due to development and requires a setback of a minimum of 50 feet from the top of the bank of any stream. Proposed setback requirements in Section 22.32.050.B and Section 22.32.060.B specify additional setbacks for solar electric facilities (SEF) and wind energy conversion systems (WECs), respectively, to protect sensitive water resources and habitat.

County Code Title 22, Section 22.52.110 requires a drainage plan for any project that increases or decreases runoff, any project that involves land disturbance of more than 20,000 square feet, or any project that results in impervious surface of more than 20,000 square feet. Therefore, such a drainage plan would be required of most SEF projects. The drainage plans will have to ensure

that an on-site drainage system is in place which prevents increases or decreases in peak storm runoff levels. The drainage plans would also address stormwater discharge quality issues with site-specific stormwater protection mechanisms.

Conformance with the County Code as well as with the requirements of state and federal water quality regulations, which would apply to all SEFs, would reduce the risk of violation of water quality standards to **less than significant (Class III)**.

Impact 3-11-1 – Wind Implementation of the proposed Program could violate water quality standards. This impact is considered **less than significant (Class III)**.

Short-Term Construction

Tier 1 WECS, which would be mounted on a rooftop or existing structure, would be streamlined under the Program. Since Tier 1 WECS would be roof-mounted, no soil disturbance or excavation would occur, and the WECS would be mounted on structures sited in primarily urban areas, away from natural streams and wetlands. While Tier 2 WECS could be ground-mounted, the same state and County requirements would apply as described for the construction of SEF projects. Compliance with these requirements would ensure that water quality degradation during the construction phase of WECS projects would be less than significant.

Long-Term Operations

County Code Title 22, Section 22.52.110 requires a drainage plan for any project that increases or decreases runoff, any project that involves land disturbance of more than 20,000 square feet, or any project that results in impervious surface of more than 20,000 square feet. Therefore, such a drainage plan would be required of some Tier 2 WECS. The drainage plans will have to ensure that an on-site drainage system is in place which prevents increases or decreases in peak storm runoff levels. The drainage plans would also address stormwater discharge quality issues with site-specific stormwater protection mechanisms.

Conformance with the County Code as well as with the requirements of state and federal water quality regulations, which would apply to all Tier 2 WECS (Tier 1 WECS would be mounted on a rooftop or existing structure and therefore streamlined under the Program), would reduce the risk of violation of water quality standards to **less than significant (Class III)**.

Impact 3-11-1 – Policy Changes Implementation of the proposed Program could result in changes to countywide policies that could violate water quality standards. This impact is considered **less than significant (Class III)**.

Conformance with the County Code as well as with the requirements of state and federal water quality regulations, which would apply to all Tier 2 and higher projects, would reduce the risk of violation of water quality standards to **less than significant (Class III).**

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 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) (Threshold 2)

Impact 3-11-2 – Solar Implementation of the proposed Program could interfere with groundwater recharge. This impact is considered **less than significant (Class III)**.

As stated in Section 2.0, Project Description, the county covers 3,616 square miles, which is the equivalent of 2,314,240 acres. Therefore, the total reasonably foreseeable land footprint of the development under the proposed Program (1,500 acres) would constitute 0.06 percent of the county. As the majority of this land would remain in a permeable state, this would constitute a **less than significant (Class III)** impact to groundwater recharge.

Impact 3-11-2 – Wind Implementation of the proposed Program could interfere with groundwater recharge. This impact is considered **less than significant (Class III)**.

As previously stated, it is assumed that the majority of renewable energy facilities allowed under the proposed Program would be solar projects, with minor numbers of wind projects. Furthermore, Tier 1 WECS projects would be mounted on an existing rooftop or existing structure and therefore would not contribute to increases in impervious surfaces. Resulting impacts would be **less than significant (Class III)**.

Impact 3-11-2 – Policy Changes Implementation of the proposed Program could interfere with groundwater recharge. This impact is considered **less than significant (Class III)**.

The implementation of the proposed policy changes would enable streamlined reviews and approvals of qualifying SEF and WECS projects to be achieved either through the building permit process, zoning clearance process, or site plan review process. The development of SEFs and WECS would be a **less than significant (Class III)** impact to groundwater recharge since the potential increase in impermeable surfaces is insignificant.

Substantially Alter the Existing Drainage Pattern of the Site or Area, Including Through the Alteration of the Course of a Stream or River, in a Manner Which Would Result in Substantial Erosion or Siltation On- or Off-Site (Threshold 3)

Impact 3-11-3 – Solar Implementation of the proposed Program could result in substantial erosion or siltation on- or off-site. This impact is considered **less than significant (Class III)**.

As previously stated, the construction of SEF projects would be required to comply with state and County requirements. These requirements will, at a minimum, include the preparation and implementation of a SWPPP identifying specific best management practices to be implemented and maintained on the site in order to comply with the applicable narrative effluent standards as described more fully under Threshold 1. Erosion controls include practices to stabilize soil, to protect the soil in its existing location, and to prevent soil particles from migrating. Examples of erosion control BMPs are preserving existing vegetation, mulching, and hydroseeding.

Sediment controls are practices to collect soil particles after they have migrated, but before the sediment leaves the site. Examples of sediment control BMPs are street sweeping, fiber rolls, silt fencing, gravel bags, sand bags, storm drain inlet protection, sediment traps, and detention basins. Wind erosion controls prevent soil particles from leaving the site in the air. Examples of wind erosion control BMPs include applying water or other dust suppressants to exposed soils on the site. Tracking controls prevent sediment from being tracked off-site via vehicles leaving the site to the extent practicable. A stabilized construction entrance not only limits the access points to the construction site but also functions to partially remove sediment from vehicles prior to leaving the site. Compliance with these requirements would ensure that erosion and siltation during the construction phase of SEF projects would be less than significant.

Runoff from operating solar energy generation facilities could include sediment. Precipitation during the early portion of the wet season displaces sediment into the stormwater runoff, resulting in high pollutant concentrations in the initial wet weather runoff. County Code Title 22, Section 22.52.110 requires a drainage plan for any grading project that increases or decreases runoff, any project that involves land disturbance of more than 20,000 square feet, or any project that results in impervious surface of more than 20,000 square feet. Therefore, such a drainage plan would be required of SEF projects that exceed any of these thresholds. The drainage plans will have to ensure that an on-site drainage system is in place which prevents increases of siltation discharge via stormwater with site-specific protection mechanisms.

Conformance with the requirements of state and County water quality regulations, which would apply to all SEFs, would result in erosion and siltation impacts that are **less than significant (Class III)**.

Impact 3-11-3 – Wind Implementation of the proposed Program could result in substantial erosion or siltation on- or off-site. This impact is considered **less than significant (Class III)**.

Tier 1 WECS, which would be mounted on a rooftop or existing structure, would be streamlined under the Program. Since Tier 1 WECS would be roof-mounted, no soil disturbance or excavation would occur, and the WECS would be mounted on structures sited in primarily urban areas, away from natural streams and wetlands. While Tier 2 WECS could be ground-mounted, the same state and County requirements would apply as under existing conditions. Compliance with these requirements would ensure that erosion and water siltation during the construction phase of the WECS projects would be less than significant.

Conformance with the requirements of state and County water quality regulations would result in impacts related to erosion and siltation that are **less than significant (Class III)**.

Impact 3-11-3 – Policy Changes Implementation of the proposed Program could result in substantial erosion or siltation on- or off-site. This impact is considered **less than significant (Class III)**.

Continued conformance with the County Code, as well as with the requirements of state water quality regulations is expected with implementation of the Program., Policy changes proposed under the Program would result in erosion and siltation impacts that are **less than significant (Class III)**.

Create or Contribute Runoff Water Which Would Exceed the Capacity of Existing or Planned Stormwater Drainage Systems or Provide Additional Sources of Polluted Runoff (Threshold 4)

Impact 3-11-4 – Solar Implementation of the proposed Program could result in the creation of runoff that would exceed the capacity of existing or planned stormwater drainage systems or provide additional sources of polluted runoff. This impact is considered **less than significant (Class III).**

As previously stated, the construction of SEF projects would be required to comply with state and County requirements. These requirements will, at a minimum, include the preparation and implementation of a SWPPP identifying specific best management practices to be implemented and maintained on the site during construction in order to comply with the applicable narrative effluent standards as described more fully under Threshold 1.

Concerning operations, County Code Title 22, Section 22.52.110 requires a drainage plan for any project that increases or decreases runoff, any project that involves land disturbance of more than 20,000 square feet, or any project that results in impervious surface of more than 20,000 square feet. Therefore, such a drainage plan would be required of any SEF projects that exceed this threshold. The drainage plans will have to ensure that an on-site drainage system is in place which prevents increases of siltation discharge via stormwater with site-specific protection mechanisms.

Conformance with the requirements of state and County water quality regulations, which would apply to all SEFs, would reduce the risk of violation of water quality standards to **less than significant (Class III)**.

Impact 3-11-4 – Wind Implementation of the proposed Program could result in the creation of runoff that would exceed the capacity of existing or planned stormwater drainage systems or provide additional sources of polluted runoff. This impact is considered **less than significant (Class III)**.

Tier 1 WECS, which are the only wind energy projects streamlined under the Program, would not result in topographic modifications or the creation of new impervious surfaces because they would all be mounted on rooftops or existing structures. Also, Tier 1 WECS would not require water for construction or operation. Therefore, construction and operation of Tier 1 WECS would not create additional runoff and impacts would be **less than significant (Class III).**

Impact 3-11-4 – Policy Changes Implementation of the proposed Program could result in changes to countywide policies that could indirectly result in the creation of runoff that would exceed the capacity of existing or planned stormwater drainage systems or provide additional sources of polluted runoff. This impact is considered **less than significant (Class III)**.

Conformance with the County Code and with the requirements of state water quality regulations, which would apply to all Tier 2 and higher projects, would reduce runoff and stormwater drainage impacts to **less than significant (Class III)**.

Substantially Alter the Existing Drainage Pattern of the Site or Area, Including Through the Alteration of the Course of a Stream or River, or Substantially Increase the Rate or Amount of Surface Runoff in a Manner Which Would Result in Flooding On- or Off-Site (Threshold 5)

Impact 3-11-5 – Solar Implementation of the proposed Program could result in the creation of runoff that could result in flooding. This impact is considered **less than significant (Class III).**

Operation of SEFs could result in runoff that could result in flooding. As previously stated, the construction of larger SEF projects, or those involving grading, would be required to comply with County requirements relating to site disturbance(County Code Title 22, Section 22.52.110). These requirements include the preparation of a drainage plan for any project that increases or decreases runoff, any project that involves land disturbance of more than 20,000 square feet, or any project that results in impervious surface of more than 20,000 square feet. Therefore, such a drainage plan would be required of most SEF projects. The drainage plans will have to ensure that an on-site drainage system is in place which adequately regulates stormwater. Per Conservation and Open Space Element Policy 6.4, drainage plans must also identify measures to detain or retain stormwater as appropriate in order to assist infiltration. Conformance with County water quality regulations, which would apply to all SEFs exceeding these thresholds, and would reduce the risk of violation of water quality standards to **less than significant (Class III)**.

Impact 3-11-5 – Wind Implementation of the proposed Program could result in the creation of runoff that could result in flooding. This impact is considered **less than significant (Class III)**.

Tier 1 WECS, which are the only wind energy projects streamlined under the Program, would not result in topographic modifications or the creation of new impervious surfaces because they would all be mounted on rooftops or existing structures. Therefore, operation of Tier 1 WECS would not create additional runoff. would not create or contribute any substantial runoff water and impacts would be **less than significant (Class III).**

Impact 3-11-5 – Policy Changes Implementation of the proposed Program could result in changes to countywide policies that could result in flooding. This impact is considered **less than significant (Class III)**.

Conformance with the County Code as well as with the requirements of state water quality regulations, which would apply to all Tier 2 and higher projects, would reduce runoff and flooding impacts to **less than significant (Class III)**.

Place Within a 100-Year Flood Hazard Area Structures Which Would Impede or Redirect Flood Flows (Threshold 6)

Impact 3-11-6 – Solar Implementation of the proposed Program could place within a 100-year Flood Hazard Area structures that would impede or redirect flood flows. This impact is considered **less than significant (Class III)**.

The County Safety Element regulates the potential to place structures within a 100-year Flood Hazard Area. Safety Element Standard S-16 states that to the extent practicable development in areas of high flood hazard potential shall not be allowed, and Standard S-18 mandates the review of all plans for construction in low-lying areas or any area which may pose a serious drainage or flooding condition. Standard S-19 prohibits all development which would create or worsen known flood and drainage problems. Such a determination would most likely be made through the preparation of a drainage report (and remedial measures, as applicable), which would be required for all SEF projects exceeding certain thresholds or found to be potentially problematic areas, per County Code Title 22, Section 22.52.110. This impact is **less than significant (Class III).**

Impact 3-11-6 – Wind Implementation of the proposed Program could place within a 100-year Flood Hazard Area structures that would impede or redirect flood flows. This impact is considered **less than significant (Class III)**.

Tier 1 WECS, which are the only wind energy projects streamlined under the Program, would not result in impacts to floodwaters because the projects would all be mounted on rooftops or existing structures and therefore would result in **less than significant (Class III)** impacts from floodwaters.

Impact 3-11-6 – Policy Changes Implementation of the proposed Program could result in changes to countywide policies that could indirectly result in placement within a 100-year Flood Hazard Area structures that would impede or redirect flood flows. This impact is considered **less than significant (Class III)**.

The implementation of the proposed policy changes would enable streamlined reviews and approvals of SEF and WECS facility projects to be achieved either through the building permit process, zoning clearance process, or site plan review process. Safety Element Standard S-16 states that to the extent practicable development in areas of high flood hazard potential shall not be allowed, and Standard S-18 mandates the review of all plans for construction in low-lying areas or any area which may pose a serious drainage or flooding condition. The proposed Program does not conflict with these policies as it does not direct or otherwise influence placement of renewable energy project in flood hazard areas. Impacts are **less than significant (Class III).**

Require or Result in the Need to Construct New Water Treatment Facilities or Expansion of Existing Facilities, the Construction of Which Could Cause Significant Environmental Issues (Threshold 8)

Impact 3-11-7 – Solar Implementation of the proposed Program could result in an adverse effect on the service capacity or operations of a community water service provider. This impact is considered **less than significant (Class III)**.

Activities including water spraying are typically used to reduce fugitive dust during construction. These activities would be undertaken on an as-needed basis following standard industry best management practices. Solar photovoltaic (PV) systems do not require water during operations other than for panel washing. Panel washing requirements and frequency would depend on technologies and site conditions, but could occur up to four times a year. A typical 20 MW facility would be expected to use approximately 215,000 gallons per year during operations.

As previously stated, 60 percent of the county's water supply comes from groundwater sources. Furthermore, Conservation and Open Space Element Policy WR 1.8 restricts the use of water from surface water projects (e.g., Lopez Lake, Lake Nacimiento) to only serve development within urban and village reserve lines and not development in rural areas, where the majority of SEF projects would be constructed.

The Conservation and Open Space Element (Implementation Strategy WR 1.12.2) requires applications for land divisions, which would increase density or intensity in groundwater basins with recommended or certified Levels of Severity II or III for water supply or water systems and are not in adjudication, to include a water supply assessment (WSA) prepared by the applicable urban water supplier (as defined by California Water Code Section 10617). The WSA would determine whether the total projected water supplies for the project during the next 20 years will meet the projected water demand associated with the proposed Program in addition to existing and planned future uses, and if water supplies will be insufficient, in which case the WSA would include the water purveyor's plans for acquiring additional water supplies.

Policy WR 1.13 prohibits the County from approving General Plan amendments or land divisions that increase the density or intensity of nonagricultural uses in rural areas that have a recommended or certified Level of Severity II or III for water supply until a Level of Severity I or better is reached, unless there is an overriding public need. Conservation and Open Space Element Policy WR 1.14 requires the County to avoid a net increase in nonagricultural water use in groundwater basins that are certified as RMS Level of Severity III for water supply. The County is required to place limitations on further land divisions in such areas until plans are in place and funded to ensure that the safe yield will not be exceeded.

SEF projects would require the use of water during construction to reduce fugitive dust as well as during operations for panel washing purposes. These activities would not demand water to the extent that new water-producing and treating facilities would need to be constructed, potentially causing environmental impact, since they do not represent a substantial increase in water demand. For instance, as previously stated a typical 20 MW facility would be expected to use approximately 215,000 gallons of water per year during operations, which is roughly the equivalent to the average annual water consumption for one single-family residence (CHF 2010). Therefore, impacts related to the need to construct new water supply and treatment facilities which could then result in an environmental impact are **less than significant (Class III)**.

Impact 3-11-7 – Wind

Implementation of the proposed Program could result in an adverse effect on the service capacity or operations of a community water service provider. This impact is considered **less than significant (Class III)**.

Operation of WECS would not impact the quantity or movement of available surface water or groundwater. Only Tier 1 WECS, which would be mounted on a rooftop or existing structure, would be streamlined under this Program. These projects would not use any water during operation since wind turbines do not require water for maintenance. Water spraying is typically used to reduce fugitive dust during construction. However, the construction of Tier 1 WECS would not require the use of water for this purpose since no ground disturbance is necessary. Impacts would be **less than significant (Class III)**.

Impact 3-11-7 – Policy Changes Implementation of the proposed Program could result in changes to countywide policies that could indirectly result in an adverse effect on the service capacity or operations of a community water service provider. This impact is considered **less than significant (Class III)**.

The implementation of the proposed policy changes to the General Plan would enable streamlined reviews and approvals of SEF and WECS facility projects to be achieved either through the building permit process, zoning clearance process, or site plan review process. No component of the Program, including policy changes, would result in the need to construct new water supply and treatment facilities which could then result in an environmental impact. Impacts are **less than significant (Class III)**.

CUMULATIVE IMPACTS

Cumulative impacts to water quality could occur due to erosion and sedimentation from the construction of individual SEF and WECS projects and other nearby projects or accidental releases of contaminants that make direct or indirect contact with surface water or groundwater resources. Earth-disturbing activities such as large-scale grading and the use of heavy vehicles and equipment are expected to occur on project sites throughout the county. It is expected that these projects would comply with all applicable water quality permits issued by the County and other permitting agencies, in addition to a SWPPP with measures to minimize erosion, sedimentation, and potential water quality impacts. These measures would reduce potential cumulative water quality impacts from construction to less than significant levels. Similarly, potential cumulative water quality impacts from operations would also be less than significant due to required conformance with the County Code as well as with the requirements of state and federal water quality regulations, which would apply to individual SEF and WECS projects and other nearby projects.

Increased drainage flows could exceed existing and/or planned drainage facilities, resulting in flooding. However, the construction of renewable energy facility projects would be required to comply with County requirements (County Code Title 22, Section 22.52.110). These requirements include the preparation of a drainage plan for any project that increases or decreases runoff, any project that involves land disturbance of more than 20,000 square feet, or any project that results in impervious surface of more than 20,000 square feet. The drainage plans will have to ensure that an on-site drainage system is in place which adequately regulates stormwater. Conformance with County water quality regulations would reduce the risk of violation of water quality standards to less than cumulatively considerable levels.

As development occurs in the region, the demand for water resources will increase, resulting in greater withdrawals from the county's groundwater aquifers and surface water supplies. However, the operation of most individual SEFs would require an insubstantial amount of water annually or the equivalent of one single-family residence. WECS would not use any water during operation since wind turbines do not require water for maintenance. The small project demand for water coupled with existing County water resource protection provisions would not necessitate the need to construct new water supply and treatment facilities which could then result in an environmental impact. Overall, the Program's contribution to water resources impacts is less than cumulatively considerable.

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3.12 Effects Determined Insignificant

California Public Resources Code Section 21003(f) states: "…it is the policy of the state that…all persons and public agencies involved in the environmental review process be responsible for carrying out the process in the most efficient, expeditious manner in order to conserve the available financial, governmental, physical, and social resources with the objective that those resources may be better applied toward the mitigation of actual significant effects on the environment." This policy is reflected in State California Environmental Quality Act (CEQA) Guidelines Section 15126.2(a), which states that "an EIR [environmental impact report] shall identify and focus on the significant environmental impacts of the proposed project" and Section 15143, which states that "the EIR shall focus on the significant effects on the environment." State CEQA Guidelines Section 15128 requires that an EIR contain a statement briefly indicating the reasons that various possible significant effects of a project were determined not to be significant and were therefore not discussed in detail in the EIR. This section discusses the following issue areas where impacts were determined to be insignificant:

- Population and Housing
- Public Services
- Transportation and Traffic

POPULATION AND HOUSING

In terms of construction, Tier 3 solar electric facility (SEF) projects would average approximately 40 personnel, while Tier 1 and 2 SEF projects would average fewer personnel depending on the construction schedule and phasing. Construction of wind energy conversion systems (WECS) would require between three and five people per tower. For construction projects of this magnitude and duration, the workforce generally comprises workers that commute to job sites rather than relocate their household to any significant degree. As such, implementation of the Renewable Energy Streamlining Program (RESP or Program) is not anticipated to result in either an in-migration or a relocation of employees to satisfy the need for temporary construction-related employment. Therefore, no increase in temporary population would occur resulting from temporary workers relocating to the immediate area. Additionally, the RESP does not include a residential component that would directly induce new population growth. In fact, during construction of the SEFs and WECs associated with the implementation of the RESP, short-term employment could result in a beneficial impact on the local economy due to an increase in demand for products, services, and supplies found in the county.

PUBLIC SERVICES

SCHOOLS AND PARKS

Since the RESP does not include the development of residential land uses that would result in an increase in population or student generation, construction and operation of the SEFs and WECS facilities would not result in an increase in student population in any school district that would serve the project sites. Therefore, the proposed projects would have no impact on San Luis Obispo County schools. Similarly, without an increase in population, existing park facilities would serve the project sites, and the Program would not require additional parks or recreational facilities.

POLICE AND FIRE PROTECTION

In addition to the solar electric systems, SEFs can include additional on-site facilities such as electrical substations while WECS include but are not limited to wind turbines, mounting posts, on-site transmission lines, operations and maintenance buildings, and other accessory structures. However, the projects approved in association with the RESP would require minimal construction and operational staff. As such, adequate police and fire protection services currently exist to serve future sites; therefore, the Program would not result in the need for additional police and fire personnel or facilities.

Wildland fire issues are addressed in Section 3.8, Hazards and Hazardous Materials.

WASTEWATER

SEFs and WECS under the Renewable Energy Streamlining Program would generate minimal volume of wastewater during construction and operational phases. Wastewater generated by the operations and maintenance buildings associated with WECS would be minimal and could be treated via on-site septic systems. As a result, SEFs and WECS would not exceed the wastewater treatment requirements of the Central Coast Regional Water Quality Control Board. Additionally, neither the SEFs nor the WECS are anticipated to require new storm drainage facilities because the facilities approved for construction would not generate a significant amount of runoff water during operations. Water from the SEF panels would continue to percolate through the ground, as the majority of surfaces associated with larger SEF projects would remain pervious.

SOLID WASTE

Waste generation during construction and operation associated with the SEFs and WECS would be minor. Solid waste will be disposed of using locally licensed waste hauling services. The San Luis Obispo Integrated Waste Management Authority operates three landfills in the county: Cold Canyon Landfill, Chicago Grade Landfill, and Paso Robles Landfill. Cold Canyon Landfill is located about 6 miles south of the City of San Luis Obispo on State Route 227 and has a capacity of 200,000 to 499,999 tons per year. Chicago Grade Landfill is located 4 miles northeast of Atascadero off of State Route 41 with a capacity of 100,000 to 199,999 tons per year. Paso Robles Landfill is located 8.5 miles east of Paso Robles off of State Route 46 East. Based on the capacity at these landfills, there is ample capacity throughout the county to receive the minor amount of solid waste generated by SEF and WECS projects (CalRecycle).

Additionally, the California Integrated Waste Management Act of 1989 (AB 939) requires every city and county in the state to prepare a Source Reduction and Recycling Element (SRRE) to its Solid Waste Management Plan that identifies how each jurisdiction will meet the mandatory state waste diversion goals of 25 percent by 1995 and 50 percent by 2000. The purpose of AB 939 is to "reduce, recycle, and re-use solid waste generated in the State to the maximum extent feasible." During decommissioning, much of the solid material (e.g., concrete and masonry, steel, reflecting mirrors, power cable, pipes, pumps) of the SEF and WECS facilities could be recycled and sold as scrap or used in road building or bank restabilization projects; the remaining nonhazardous waste would be sent to permitted disposal facilities. As such, SEF and WECS facilities would comply with waste reduction and recycling requirements.

TRANSPORTATION AND TRAFFIC

There are over 1,900 miles of roadway countywide ranging from freeways to unsurfaced roads. The county road system contains 1,300 miles, with the remaining mileage in the incorporated cities (San Luis Obispo County 2011). There are 341 miles of state highways in the county.

Travel in the county is a function of the distribution and size of population and economic activity within and outside the Coastal Zone as well as throughout the county. Travel patterns and vehicle trip volumes in the county are affected by the dispersal of housing in relation to economic activity.

Implementation of SEFs and WECS would require a variety of transportation activities over the life of a project. Most of these transportation activities would involve the movement of workers, materials, and equipment to the specific development project site during the construction phase. The types and amounts of materials and equipment would depend on the technology type as well as site-specific characteristics. Construction of renewable energy projects would result in temporary increases in traffic trips on local roads and highways in the vicinity of a proposed renewable energy project site. Construction-related traffic would include worker vehicles and trucks delivering materials and supplies to the specific renewable energy project site. Construction of SEF and WECS facilities would vary in size; however, the size and magnitude projects permitted under the RESP would not result significant impacts on local roadways.

Ongoing operations and maintenance of SEF and WECS facilities would require worker commutes and deliveries of supplies. Accordingly, transportation activities during operations would be limited to a small number of trips by personal vehicles and a few truck shipments. Given the small number of traffic trips generated by operations of solar energy projects, the associated negligible increase in trips on local roadways and highways would not adversely impact the local transportation system or otherwise degrade level of service operations.

REFERENCES

CalRecycle (California Department of Resources Recycling and Recovery). 2014a. Chicago Grande Landfill. Accessed October 7. http://www.calrecycle.ca.gov/SWFacilities/Directory/40-AA-0008/Detail/.

———. 2014b. City of Paso Robles Landfill (40-AA-0001). Accessed October 7. http://www.calrecycle.ca.gov/SWFacilities/Directory/40-AA-0001/.

———. 2014b. Cold Canyon Landfill. Accessed October 7. http://www.calrecycle.ca.gov/SWFacilities/Directory/40-AA-0017/Detail/.

SLO County (County of San Luis Obispo). 2011.

4.0 ALTERNATIVES

The alternatives analysis consists of the following components: an overview of California Environmental Quality Act (CEQA) requirements for alternatives analysis, descriptions of the alternatives evaluated, a comparison between the anticipated environmental effects of the alternatives and those of the proposed Renewable Energy Streamlining Program (RESP or Program), and identification of an "environmentally superior" alternative.

4.1 CEQA REQUIREMENTS FOR ALTERNATIVES

The CEQA Guidelines require that an environmental impact report (EIR) describe a reasonable range of alternatives to a project that would feasibly attain the basic project objectives but would avoid or substantially lessen one or more of the project's significant effects (CEQA Guidelines Section 15126.6(a)).

In addition, CEQA Guidelines Sections 15126.6(a) and (b) require the consideration of alternatives that could reduce or eliminate any significant adverse environmental effects of the proposed project, including alternatives that may be more costly or could otherwise impede the project's objectives. The range of alternatives considered must include those that offer substantial environmental advantages over the proposed project and may be feasibly accomplished in a successful manner considering economic, environmental, social, technological, and legal factors. The CEQA Guidelines also require analysis of a "No Project" alternative and identification of the environmentally superior alternative among those analyzed.

4.2 DEVELOPMENT OF PROGRAM ALTERNATIVES

This section discusses the reasoning for selecting the alternatives and summarizes the assumptions identified for the alternatives. The range of alternatives included for analysis in an EIR is governed by the "rule of reason." The primary objective is formulating potential alternatives and choosing which ones to analyze to ensure that the selection and discussion of alternatives fosters informed decision-making and informed public participation. This is accomplished by providing sufficient information to enable readers to reach conclusions themselves about such alternatives. This approach avoids assessing an unmanageable number of alternatives or analyzing alternatives that differ too little to provide additional meaningful insights about their environmental effects. The alternatives addressed in this Draft EIR were selected in consideration of one or more of the following factors:

- The extent to which the alternative would accomplish most of the basic objectives of the project.
- The extent to which the alternative would avoid or reduce any of the identified significant effects of the project.
- The feasibility of the alternative, taking into account site suitability and parcel sizes, as well as consistency with applicable public plans, policies, and regulations.
- The appropriateness of the alternative in contributing to a reasonable range of alternatives necessary to permit a reasoned choice.

The alternatives analyzed in this DEIR were ultimately chosen based on each alternative's ability to feasibly attain the basic Program objectives while avoiding or reducing one or more of the Program's significant effects. The analysis provides readers with adequate information to compare the effectiveness of identified mitigation or significant adverse impacts and to enable readers to make decisions about the project. CEQA requires EIRs to address a reasonable range of reasonable alternatives, not all potential alternatives.

The County adopted an iterative approach to development of the performance standards included in the RESP. As each section of the code was completed, environmental analysis was conducted and then changes were made to the code to reduce or eliminate impacts that were identified. In essence, this project analysis and feedback loop constituted a comprehensive alternatives analysis where an alternative was analyzed then revised to avoid environmental impacts. The result was that numerous versions of the Program (i.e., alternatives) were considered and dismissed from further evaluation, ultimately leading to the project evaluated in this EIR.

While the RESP was under continual refinement, not all of the potential environmental impacts could be reduced to less than significant levels (Class III). The performance standards contained in the RESP are intended to result in self-mitigation for most projects. Projects that could not be fully mitigated are required to complete a discretionary review process and comply with CEQA. This self-mitigating aspect is why there are no mitigation measures in the EIR. Any action that would be considered a mitigation measure for the Program is included as a performance standard.

PROGRAM OBJECTIVES

As noted above, an EIR must describe a reasonable range of alternatives to a project that would feasibly attain the basic project objectives while avoiding or reducing one or more of the project's significant effects (CEQA Guidelines Section 15126.6(a)). In identifying the range of alternatives for analysis in this EIR, the following four objectives were considered:

1) Create a Renewable Energy (RE) Combining Designation that identifies locations where certain renewable solar electric facilities will qualify for permit streamlining if they meet specified standards and conditions for project size, site characteristics, and environmental protections.

2) Revise the Land Use Ordinance (LUO) to foster permit streamlining for other specified types of renewable energy facilities throughout the non-Coastal Zone portions of the unincorporated county (both within and outside of the RE Combining Designation).

3) Support achievement of the County's goal to increase the production of renewable energy from small- and commercial-scale energy installations to account for 10 percent of total local energy by 2020 as presented in the County EnergyWise Plan.

4) Provide a clear process and expectations for renewable energy projects in suitable locations that minimize environmental impacts.

IMPACTS FOUND SIGNIFICANT

Implementation of the proposed Program would result in significant, unavoidable, and adverse impacts (Class I) for three impact areas as shown in **Table 4.0-1**. The impacts are identified in the EIR because even with full compliance with the standards set forth in Title 22, Section 22.14.100, it is likely that one or more of the impacts will remain. The intent of the alternatives is to determine whether changes to the project would reduce or eliminate some of the Class I impacts. As noted in **Table ES-1** of Section ES, Executive Summary, all other impacts are considered to have less than significant or beneficial impacts (Class III and IV).

TABLE 4.0-1
CLASS I IMPACTS FROM IMPLEMENTATION OF THE RESP

Aesthetics and Visual Resources		
Impact 3-1-1 **Solar**	Implementation of the proposed Program could result in the development of solar energy projects that have a substantial adverse effect on a scenic view.	Significant, Unavoidable, and Adverse
Impact 3-1-1 **Policy Changes**	Implementation of the proposed Program could result in the development of renewable energy projects that have a substantial adverse effect on a scenic view.	Significant, Unavoidable, and Adverse
Impact 3-1-3 **Solar**	Implementation of the proposed Program could substantially degrade the visual character of an area.	Significant, Unavoidable, and Adverse
Impact 3-1-3 **Policy Changes**	Implementation of the proposed Program could substantially degrade the visual character of an area.	Significant, Unavoidable, and Adverse
Agricultural Resources		
Impact 3-2-1 **Solar**	Implementation of the proposed Program could convert Important Agricultural Soils to nonagricultural use.	Significant, Unavoidable, and Adverse
Impact 3-2-1 **Policy Changes**	Implementation of the proposed Program could result in changes to countywide policies that could indirectly result in the conversion of Important Agricultural Soils to nonagricultural use.	Significant, Unavoidable, and Adverse
Land Use and Planning		
Impact 3-9-4	The proposed Program could indirectly create a disturbance that could diminish the function of a particular land use.	Significant, Unavoidable, and Adverse

4.3 ALTERNATIVE DESCRIPTIONS AND ANALYSIS

DESCRIPTION OF ALTERNATIVES

Alternative 1: Limited Combining Designation Scope

Alternative 1 consists of an RE Combining Designation that is more limited in scope than that of the proposed RESP by limiting projects to rooftop and structure-mounted projects, and ground mounted projects of 40 acres or less. This alternative would also limit streamlining (i.e. ministerial approvals) to only those projects that could be fully screened from public view adjacent to a project site, and would require that Tier 1 ground-mounted SEFs not be located on Important Agricultural Soils. The intent of this alternative is to reduce the project's Class I impacts to aesthetics and visual resources, agricultural resources, and land use and planning, and reduce overall impacts to other resource areas by substantially reducing the maximum allowed project footprint.

Alternative 2: Smaller Combining Designation Footprint

Alternative 2 consists of a RE Combining Designation that excludes all land with Important Agricultural Soils. This would reduce the total acreage of the RE Combining Designation from 801,910 acres to approximately 483,570 acres, a reduction of approximately 40 percent. The sole intent of this alternative is to reduce the potential for Class I impacts associated with the conversion of agricultural land to nonagricultural uses, identified in the Sections 3.2 and 3.9. All other aspects of the Program as proposed would remain unchanged.

Alternative 3: No Project

Alternative 3 is the CEQA-mandated No Project Alternative. Under Alternative 3, existing policies governing renewable energy development in the county would remain in place. Environmental impacts may be reduced in some instances because all projects would be evaluated individually and with potentially greater scrutiny. However, Alternative 3 could also result in more cumbersome permitting processes with less certain outcomes, thus resulting in less renewable energy development than would occur under the proposed Program.

ANALYSIS OF ALTERNATIVES

Each alternative is compared to the proposed Program. As provided under CEQA Section 15126.6(f), the project alternatives are evaluated in less detail than those of the proposed project, and the impacts are described in terms of difference in outcome compared with implementing the proposed Program. **Table 4.0-2** at the end of this section provides an "at-a-glance" comparison of the environmental benefits and impacts of each alternative as compared to the proposed Program.

Comparative Impacts of Alternative 1: Limited Combining Designation Scope

Aesthetics and Visual Resources

This alternative is intended to eliminate the Class I impacts associated with the views of larger (160-acre) SEF projects and WECS projects with 100-foot ground-mounted wind turbines. As noted in the EIR, projects of this size can be screened from view along the adjacent roadway, but fully screening them from public view may not always be technically feasible. By reducing the potential size of the project from 160 acres to 40 acres, the potential for aesthetic impact is less than with the proposed project. Even with this reduction in size, however, projects may still be visible from off-site public views and would remain a Class I impact.

Agricultural Resources

Because this alternative would not allow ministerial approvals for ground-mounted Tier 1 SEF projects located on Important Agricultural Soils, the potential impact on agricultural resources would be less than that of the proposed project and would reduce the Class I impact to Class III.

Air Quality

This alternative would result in smaller individual projects but may result in the same amount of land being disturbed as the proposed project, as there is no prohibition on the number of projects, only the size. It is also possible that smaller project sizes would result in more overall land being disturbed because more area for access roads and utility equipment would be needed to

serve more individual projects. Overall, construction and operational air quality impacts would be similar to those of the proposed Program (Class III).

Biological Resources

An emphasis on roof-mounted and smaller ground-based SEF and WECS projects envisioned by this alternative would reduce the potential for biological impacts when compared to the proposed project. Provisions of the Program require a biological analysis for ground-mounted projects, and similar provisions would be required for any project under this alternative. As a result, impacts to biological resources would be considered Class III, similar to the proposed project.

Cultural Resources

Limiting project sites to building sites and making the overall sites smaller than those envisioned by the proposed project could reduce the potential for cultural resource impacts. However, as there is no cap on the number of projects, it is possible that the same land area would be developed, only in smaller pieces. Adherence to state law as well as to the provisions of the Program would result in Class III impacts, similar to those of the proposed project.

Geology and Soils

An emphasis on roof-mounted and smaller ground-based SEF and WECS projects envisioned by this alternative could reduce the potential for soil disturbance and associated impacts when compared to the proposed project. Multiple smaller projects directed away from Important Agricultural Soils may still disturb the same amount of land as the proposed project.

Provisions of the Program require a detailed grading plan (Section 22.08.030) as part of the application and site review process. Because any project meeting the criteria for a grading plan would have a similar review and approval process with the County, the impacts of this alternative would be similar to those of the proposed project. As a result, impacts to geology and soils would be considered Class III, similar to the proposed project.

Greenhouse Gases and Climate Change

While smaller individual projects would result in less grading and construction per project, there is no cap on the number of renewable energy projects. Therefore, this alternative may result in a similar amount of area being developed. Further, it is possible that multiple smaller projects may result in more land being developed, as there would be more area needed for access and equipment than if there were fewer but larger projects. Overall, this alternative would result in similar Class III and IV impacts with respect to greenhouse gases and climate change.

Hazards and Hazardous Materials

This alternative could result in smaller individual projects than the proposed project. Smaller projects are likely to have a smaller quantity of potentially hazardous materials in a single location, which reduces the magnitude of impact from an accidental spill or misuse. However the larger number of projects would increase the number of areas that store material and therefore also increase the potential for spill or misuse. The County regulates the storage and use of potentially hazardous materials through existing ordinances and provisions of the Program, and these regulations would also apply to any project under this alternative. The impacts of

project development on hazards and hazardous materials are considered Class III, similar to those of the proposed project.

Land Use and Planning

This alternative would still permit Tier 1 and smaller Tier 2 projects on land in the county. Impacts associated with land use are considered mostly similar to those of the proposed project. However, this alternative would not allow ministerial approvals for ground-mounted Tier 1 SEFs located on Important Agricultural Soils, thereby reducing impacts related to agricultural land to less than significant (Class III).

Noise

Transformers associated with SEF projects are known to make noise, and both setbacks and screening included in the RESP address this issue. Because this alternative could result in a greater number of smaller projects, there could accordingly be more transformers. However the smaller projects would result in smaller transformers and less noise. Regardless, because setback and screening requirements would still apply, impacts would remain similar to the proposed project. The Program addresses these issues and would apply to any project in this alterative, resulting in a Class III impact.

Water Resources

While the project size would be smaller, the number of projects would increase. Water usage is incidental to the project overall and is needed to wash the solar panels. Therefore, whether there are panels in a single location or in several locations, the amount of water usage is likely to stay the same. There would still be the need for dust control during construction and washing of the SEF installations to ensure performance. Similar to the proposed project, this would represent a Class III impact.

Summary of Alternative 1

This alternative would result in smaller projects overall and would only allow projects in areas largely disturbed by existing land use practices. Overall, this alternative would reduce Class I agricultural resources and related land use and planning impacts to Class III, while aesthetics and visual resources impacts would remain Class I, and other impact areas would have similar Class III impacts to those of the proposed project

This alternative would meet objectives 1 and 4 by providing a clear statement as to where facilities could be located and establishing precise standards for construction in the RESP. Objectives 2 and 3 would not be fully realize, as the alternative places greater restrictions on project size and siting. This would not further the intent of encouraging renewable energy generation in more areas of the county.

Comparative Analysis of Alternative 2: Smaller Combining Designation Footprint

Aesthetics and Visual Resources

This alternative would avoid conversion of Important Agricultural Soils but still result in project sizes and features similar to those of the proposed project. Screening for larger (160-acre) sites is effective only when the observer is relatively close to the project site. From a distance or with even a slight topographic elevation, SEF projects will be visible. The EIR determined that, even

with the screening measures required by the Program, the visual impact of the proposed project is considered Class I with no certainty of effective and feasible mitigation for all future projects under the Program. This alternative would have a similar Class I impact.

Agricultural Resources

This alternative would not permit a SEF or WECS project on any land with Important Agricultural Soils. Because none of the identified significant agricultural soil categories would be affected, the alternative would reduce a Class I impact to a Class III impact.

Air Quality

This alternative assumes that Important Agricultural Soils would be avoided but that a similar amount of land area may be affected. Land disturbance would be similar to that of the proposed project. Overall, construction and operational air quality impacts would be similar to those of the proposed Program (Class III).

Biological Resources

This alternative would have less land disturbance and therefore has a less of a potential to impact biological resources. Provisions of the Program require a biological analysis for ground-mounted projects, and similar provisions would be required for any project under this alternative. As a result, impacts to biological resources would be considered Class III, similar to the proposed project.

Cultural Resources

The potential land area for development with this alternative is less than that of the proposed project. With less land area potentially affected by construction, the impact to cultural resources would also be less than that of the proposed project. Construction requirements of the County and the Program would result in similar Class III impacts to cultural resources.

Geology and Soils

Provisions of the LUO require a detailed grading plan (Section 22.08.030) as part of the application and site review process. Because any project meeting the criteria of the LUO for a grading plan would have a similar review and approval process with the County, the impacts of this alternative would be similar to those of the Program (Class III).

Greenhouse Gases and Climate Change

The potential buildout scenario under this alternative would be similar to that of the proposed Program. Total land disturbed and construction and operational emissions would likewise be similar and accordingly this alternative would result in similar Class III and IV impacts with respect to greenhouse gases and climate change.

Hazards and Hazardous Materials

The Program as proposed would result in potential for larger facilities to store hazardous materials such as herbicides and dust palliatives. This alternative assumes projects with storage needs similar to those of the proposed Program. The County regulates the storage and use of potentially hazardous materials through existing ordinances and provisions in the Program, and

these regulations would also apply to any project under this alternative. The impacts of project development on hazards and hazardous materials are considered Class III, similar to those of the proposed Program.

Land Use and Planning

The emphasis on avoiding Important Agricultural Soils would result in a Class III land use and planning impact related to agricultural land conversion, compared to the Class I impact associated with the proposed project. However, the elimination of these agricultural lands may result in some of these projects moving into other areas of the county and affecting different resources. Further, restricting the ability of existing farms to make use of SEF or WECS projects to offset operational costs may affect the viability of smaller farms, leading to a request for land conversion.

Noise

Transformers associated with SEF projects are known to make noise, and both setbacks and screening included in the proposed Program address this issue. Projects associated with this alternative will have transformers in need of setback and noise attenuation. Therefore, noise impacts would remain similar to the Program. The Program addresses noise by establishing design criteria that also apply to any future project that would be proposed in this alterative, resulting in a similar Class III impact.

Water Resources

This alternative assumes project sizes similar to those allowed in the proposed Program and needing the same amounts of water during construction and operation as the proposed Program. Therefore, this alternative would result in similar Class III impact to water resources.

Summary of Alternative 2

This alternative could result in similarly sized projects as the proposed Program but may result in smaller projects overall in order to avoid Important Agricultural Soils. The Class I agricultural resources and land use and planning impacts associated with the proposed project would be reduced to Class III impacts under this alternative, while the Class I aesthetics and visual resources impact would remain.

An indirect impact of this alternative may be a need to expand the combining designation in order to meet the projected need for renewable energy projects. The expansion may need to occur on slopes, ridgelines, and other areas that are not suited to agriculture.

Another indirect impact may be that farmers with lands meeting these criteria may be prevented from installing renewable energy systems on their lands simply because of the soils involved. This would be counter to the intent of the program and could result in an undue burden on the agricultural use. This alternative would meet objectives 1, 2, and 4. Objective 3 would be met, albeit to a lesser extent than that of the proposed project, as it is likely that fewer projects would be developed due to the 40 percent reduction in the RE Combining Designation area.

Comparative Analysis of Alternative 3: No Project

Aesthetics and Visual Resources

Existing County policies allow the installation of roof-mounted solar panels with issuance of a building permit. There are no provisions for ground-mounted panels or installation of wind turbines; however, as long as the setback provisions of Title 22 are met, permits for these types of projects are also issued as a ministerial act.

The proposed Program establishes location and screening criteria that address visual impacts for all project sizes. The no project alternative would not result in a single set of standards and could therefore result in a variety of visual impacts.

Customized visual mitigation would likely be required as each project moved through the approval process, and in most cases would probably result in less than significant impacts with mitigation incorporated (Class II) if the project is visible from a public road. If not visible from a public road, projects would be Class III.

The current process, while taking longer than the proposed, may result in reduced impacts when compared to the project. Projects likely to have Class I impacts would be required to prepare an independent project-specific EIR, with mitigation measures and findings as appropriate. For smaller projects, the cost and time associated with preparation of an EIR may reduce the extent or prevent participation in the program.

As proposed, Tier 2 and above projects outside of the combining district will require discretionary review and may result in site-specific mitigation in addition to the program requirements. Because each project would be required to mitigate impacts to an individual level, the potential for Class I impacts will be reduced when compared to the proposed Program.

Agricultural Resources

Currently each request for a renewable energy project is addressed individually. Elements of the proposed Program also require site information specific to the development request. The Class I impact identified for the proposed project is related to SEFs of 20 acres or less that may be located on Important Agricultural Soils (albeit disturbed), without need for mitigation. Under the no project alternative, it is likely that this type of project would trigger discretionary review, CEQA analysis, and mitigation, thus resulting in a Class II impact.

Air Quality

Due to lack of a streamlining program, this alternative could result in fewer projects and less land area affected. Construction requirements of the County and conditions of approval from the discretionary project review required under this alternative would likely result in Class II or III impacts for this alternative. Note that the Class II determination would be a function of mitigation measures proposed for individual projects. The proposed Program includes these measures as permit requirements. Overall, impacts would be similar to those of the proposed Program.

Biological Resources

Due to lack of a streamlining program, this alternative could result in fewer projects, less land area affected, and potentially lesser impacts to biological resources. All projects (save for roof-mounted SEFs) would require discretionary review and appropriate mitigation measures for impacts to biological resources. While such impacts be considered less than significant with mitigation incorporated (Class II), this is equivalent to equivalent to the Class III impacts identified for the proposed Program, since the biological resource protective measures and standards have been incorporated into the Program.

Cultural Resources

The potential land area for development with this alternative is less than that of the proposed project. However, the alternative could result in an equivalent overall land footprint and thus impacts to cultural resources would be similar to those of the proposed Program. Construction requirements of the County and CEQA would result in a determination of less than significant with mitigation incorporated (Class II), equivalent to the Class III impacts identified for the proposed Program, since the cultural resource protective measures and standards have been incorporated into the Program.

Geology and Soils

The County Code already requires grading plans for ground disturbance, which would address any impacts under this alternative. As a result, impacts to geology and soils would be considered less than significant with mitigation incorporated (Class II), which is equivalent to the Class III impacts identified for the proposed Program since the resource protective measures and standards have been incorporated into the Program. The impacts of this alternative would be similar to those of the proposed Program.

Greenhouse Gases and Climate Change

Due to lack of a streamlining program, this alternative could result in fewer projects and less land area affected. Construction requirements of the County and conditions of approval from the discretionary project review required under this alternative would likely result in Class II or III impacts for this alternative. Note that the Class II determination would be a function of mitigation measures proposed for individual projects. The proposed Program includes these measures as permit requirements. Overall, impacts would be similar to those of the proposed Program.

Hazards and Hazardous Materials

This alternative assumes projects with storage needs similar to those of the proposed Program. The County regulates the storage and use of potentially hazardous materials through existing ordinances and these regulations would apply to any project under this alternative. As a result, impacts to would be considered less than significant with mitigation incorporated (Class II), which is equivalent to the Class III impacts identified for the proposed Program, since the resource protective measures and standards have been incorporated into the Program. The impacts of this alternative would be similar to those of the proposed Program.

Land Use and Planning

The no project alternative would allow each property owner to approach the County for renewable energy projects where allowable by the current LUO, or where the proposed project is considered an accessory electric generating plant generating power for on-site use only. Overall, the impact on land use and planning would be lesser (Class III) for this alternative, as it is reasonably foreseeable that conversion of important agricultural land would be mitigated or avoided through the discretionary review and CEQA compliance processes.

Noise

Projects associated with this alternative will have transformers in need of setback and noise attenuation. Therefore, noise impacts would remain similar to the proposed Program. Compliance with the CEQA process for each project would address noise by establishing design criteria that apply to each project in this alterative, resulting in a determination of less than significant with mitigation incorporated (Class II), which is the same as the Class III, anticipated by meeting the performance standards incorporated into the proposed Program.

Water Resources

This alternative assumes project types and sizes similar to the proposed Program and using the same amounts of water during construction and operation. Compliance with the CEQA process for each project would address water resources, likely resulting in a determination of a less than significant impact (Class III) or less than significant impact with mitigation incorporated (Class II). Overall, impacts would be similar to those of the proposed Program. Summary of Alternative 3

This alternative is likely to result in fewer projects overall due to the absence of a permit streamlining program. As each project will need to conduct its own CEQA analysis and permit approval process, there are greater assurances that significant impacts related to aesthetics and visual resources and agricultural land conversion would be mitigated or avoided. Overall, this alternative could result in a lesser degree of aesthetic and visual resource, agricultural resource, and land use and planning impacts (Class II and III). However, this alternative would not successfully meet the primary objectives of the proposed Program.

4.4 ENVIRONMENTALLY SUPERIOR ALTERNATIVE

Tables 4.0-2 and **4.0-3** provide a summary of each alternative's comparable impacts and ability to meet objectives of the Program. Based on the results of this section, Alternative 2 would be the environmentally superior alternative, as it results in lesser impacts overall, specifically reduces the Class I agricultural resources and related land use and planning impacts to Class III, and meets most of the key Program objectives.

TABLE 4.0-2
ALTERNATIVES IMPACTS COMPARISON

Environmental Issue	Proposed Program Impact Finding	Alternative		
		1 Reduced Scope	2 Reduced Footprint	3 No Project
Aesthetics and Visual Resources	Class I, III	<	<	<
Agricultural Resources	Class I, III	<	<	<
Air Quality	Class III	=	=	=
Biological Resources	Class III	=	=	=
Cultural Resources	Class III	=	=	=
Geology and Soils	Class III	=	=	=
Greenhouse Gases and Climate Change	Class III, IV	=	=	=
Hazards and Hazardous Materials	Class III	=	=	=
Land Use and Planning	Class I, III	<	<	<
Noise	Class III	=	=	=
Water Resources	Class III	=	=	=

< Impacts less than those under proposed Program
> Impacts greater than those under proposed Program
= Impacts similar to those under proposed Program

TABLE 4.0-3
COMPARISON OF ALTERNATIVES TO PROGRAM OBJECTIVES

Objectives	Alternative		
	1 Reduced Scope	2 Reduced Footprint	3 No Project
Create a Renewable Energy (RE) Combining Designation that identifies locations where certain renewable solar electric facilities will qualify for permit streamlining if they meet specified standards and conditions for project size, site characteristics, and environmental protections.	✓	✓	×
Revise the Land Use Ordinance to foster permit streamlining for other specified types of renewable energy facilities throughout the non-Coastal Zone portions of the unincorporated county (both within and outside of the RE Combining Designation).	×	✓	×
Support achievement of the County's goal to increase the production of renewable energy from small- and commercial-scale energy installations to account for 10 percent of total local energy by 2020 as presented in the County EnergyWise Plan.	×	✓	×
Provide a clear process and expectations for renewable energy projects in suitable locations that minimize environmental impacts.	✓	✓	×

× Alternative does not meet the objective
✓ Alternative meets the objective

5.0 Other CEQA Considerations

This section discusses additional topics statutorily required by the California Environmental Quality Act (CEQA), including growth-inducing impacts, significant irreversible environmental changes, and energy use (CEQA Guidelines Appendix F analysis).

5.1 GROWTH-INDUCING IMPACTS

INTRODUCTION

CEQA Guidelines Section 15126.2(d) requires that an environmental impact report (EIR) evaluate the growth-inducing impacts of a proposed action. A growth-inducing impact is defined by State CEQA Guidelines Section 15126.2(d) as follows:

> *...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 in this are projects which would remove obstacles to population growth... Increases in the population may tax existing community service facilities, requiring construction of new facilities that could cause significant environmental effects. Also...the characteristic of some projects which may encourage and facilitate other activities that could significantly affect the environment, either individually or cumulatively.*

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., 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. For example, 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 further explain 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.

The guidelines state that it is not assumed that growth in an area is necessarily beneficial, detrimental, or of little significance to the environment (State CEQA Guidelines Section 15126.2(d)). However, 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. A project that would induce "disorderly" growth (growth that conflicts with local land use plans) could indirectly cause additional adverse environmental impacts and other public services impacts. Thus, to assess whether a growth-inducing project would result in adverse secondary effects, it is important to assess the degree to which the growth accommodated by a project would or would not be consistent with applicable land use plans.

COMPONENTS OF GROWTH

The timing, magnitude, and location of land development and population growth in a community or region are based on various interrelated land use and economic variables. Key variables include regional economic trends, market demand for residential and nonresidential uses, land availability and cost, the availability and quality of transportation facilities and public services, proximity to employment centers, the supply and cost of housing, and regulatory policies or conditions.

PROJECT-SPECIFIC GROWTH-INDUCING IMPACTS

Growth Inducement Potential

While the implementation of this Program would contribute to energy supply, which indirectly supports population growth, the proposed development of projects associated with the Renewable Energy Streamlining Program (RESP or Program) is a response to the state's need for renewable energy to meet its Renewables Portfolio Standard. Unlike a gas-fired power plant, projects associated with this program EIR are not being developed as a source of baseload power in response to growth in demand for electricity. The power generated would be added to the state's electricity grid with the intent that it would displace fossil fuel–based power plants and their associated environmental impacts, consistent with the findings and declarations in Senate Bill 2 (2011) that a benefit of the Renewables Portfolio Standard is displacing fossil fuel consumption in the state. In addition, the RESP is also consistent with the County's EnergyWise Plan's renewable rnergy goals to increase the production of renewable energy from small- and commercial-scale energy installations.

Implementation of the RESP would supply energy to accommodate and support existing demand and projected growth, but it would not foster any new growth because (1) the additional energy would be used to ease the burdens of meeting existing statewide energy demands within and beyond the area of the project; (2)displace energy demand currently met by fossil fuels; and (3) the factors affecting growth are so diverse that any potential connection between additional energy production and growth would necessarily be too speculative and uncertain to merit further analysis.

Additionally, RESP implementation would not involve the development of any new roadways, water systems, or sewer; thus, the projects would not further facilitate additional development. Therefore, infrastructure improvements to serve each of the projects approved in association with the RESP are limited and would not be available to serve surrounding areas. In fact, Tier 1 solar electric facilities (SEF) and wind energy conversion systems (WECS) projects would be located on existing developed land uses zoned for development, and Tier 2 and Tier 3 SEF projects would be located in urban areas (vacant or non-vacant) on land uses designated as Commercial (CS) or Industrial (IND). While this document has considered that SEF and WECS projects might foster regional growth, the particular growth that could be attributed to these projects is unpredictable, given the multitude of variables at play, including uncertainty about the nature, extent, and location of growth and the effect of other contributors to growth besides the RESP. However, despite these uncertainties, the RESP is not considered to be growth-inducing since the overall goal of the program helps to achieve the County's renewable energy goals that implement statewide energy goals.

5.2 SIGNIFICANT IRREVERSIBLE ENVIRONMENTAL CHANGES

Public Resources Code Section 21100(b)(2), a part of CEQA, requires that certain EIRs include a discussion of significant irreversible environmental changes of project implementation. State CEQA Guidelines Section 15126.2(c) describes irreversible environmental changes as follows:

> *Uses of nonrenewable resources during the initial and continued phases of the project may be irreversible since a large commitment of such resources makes removal or non-use thereafter unlikely. Primary impacts and, particularly, secondary impacts (such as highway improvement which provides access to a previously inaccessible area) generally commit future generations to similar uses. Also irreversible damage can result from environmental accidents associated with the project. Irretrievable commitments of resources should be evaluated to assure that such current consumption is justified.*

NONRENEWABLE RESOURCES

Energy resources needed for the construction of projects associated with RESP implementation would contribute to the incremental depletion of nonrenewable resources. Nonrenewable resources such as steel, copper, lead and other metals, gravel, concrete, and other materials are typically considered finite and would not be replenished over the lifetime of each of the projects associated with implementation of the Program. Thus, implementation of the RESP would irretrievably commit resources over the anticipated life span of the projects associated with the program. However, during decommissioning, some of these resources (i.e., steel, concrete, etc.) can be recycled or reclaimed for other uses and as such, would be renewable to a certain degree.

5.3 ENERGY USE

In order to ensure that energy implications are considered in project decisions, CEQA requires that EIRs include a discussion of the potential energy impacts of proposed projects, with particular emphasis on avoiding or reducing inefficient, wasteful, and unnecessary consumption of energy (see Public Resources Code Section 21100(b)(3)). According to Appendix F of the State CEQA Guidelines, the goal of conserving energy implies the wise and efficient use of energy including:

1. **Decreasing overall per capita energy consumption** by creating afforded streamline permitting for renewable energy projects.

2. **Decreasing reliance on natural gas and oil** by increasing the production of renewable energy from small- and commercial-scale energy installations to account for 10 percent of total local energy by 2020.

3. **Increasing reliance on renewable energy sources** by providing a clear process and expectations for renewable energy projects in suitable locations that minimize environmental impacts.

Implementation of the RESP would help achieve these goals because it would develop a renewable source of power, helping to offset the use of nonrenewable resources and contribute to an overall reduction of nonrenewable resources currently used to generate electricity. In addition, Section 3.7, Greenhouse Gases and Climate Change, describes effects on climate change/greenhouse gas emissions that would be caused by implementation of the RESP, including a discussion on the effects of the projects on energy resources.

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7.0 Abbreviations

7.1 ABBREVIATIONS

AB	Assembly Bill
AC	alternating current
ACBM	asbestos-containing building material
ACM	asbestos-containing material
AFY	acre-feet per year
AG	Agriculture
APE	area of potential effect
ATCM	Air Toxics Control Measure
BAU	business as usual
BLM	US Bureau of Land Management
BMP	best management practices
CAAQS	California ambient air quality standards
CalEEMod	California Emissions Estimator Model
Cal-EPA	California Environmental Protection Agency
Cal Fire	California Department of Forestry and Fire Protection
Cal/OSHA	California Occupational Safety and Health Administration
CalRecycle	California Department of Resources Recycling and Recovery
Caltrans	California Department of Transportation
CARB	California Air Resources Board
CBSC	California Building Standards Code
CCIC	Central Coast Information Center
CCR	California Code of Regulations
CDFW	California Department of Fish and Wildlife
CdTe	cadmium telluride
CEC	California Energy Commission
CEQA	California Environmental Quality Act
CESA	California Endangered Species Act
CH_4	methane
CHP	California Highway Patrol
CNEL	community noise equivalent level
CO	carbon monoxide
COSE	Conservation and Open Space Element
CO_2	carbon dioxide
CO_2e	carbon dioxide equivalent
CPUC	California Public Utilities Commission
CS	Commercial, Service
CSA	County Service Area
CSD	Community Services District
CUPA	Certified Unified Program Agency
CWA	Clean Water Act

dB	decibel
dBA	A-weighted decibel
DC	direct current
DEIR	Draft Environmental Impact Report
DOC	California Department of Conservation
Draft EIR	Draft Environmental Impact Report
DTSC	California Department of Toxic Substances Control
EIR	environmental impact report
EOP	Emergency Operations Plan
EPA	US Environmental Protection Agency
ESA	Endangered Species Act
EX	Energy and Extractive Resource Area
EX1	Extractive Resource Area
FAA	Federal Aviation Administration
FEIR	Final Environmental Impact Report
FEMA	Federal Emergency Management Agency
FH	Flood Hazard
FIRM	Flood Insurance Rate Maps
FMMP	Farmland Mapping and Monitoring Program
FSZ	Farmland Security Zone
GHG	greenhouse gas
GIS	geographic information system
GSA	Geologic Study Area
GWP	global warming potential
HFC	hydrofluorocarbon
HU	hydrologic unit
IND	Industrial
IRF	Intermediate Regional Flood
IRWMP	Integrated Regional Water Management Plan
kV	kilovolt
LAFCO	Local Agency Formation Commission
LCFS	Low Carbon Fuel Standard
L_{dn}	day-night average sound level
LOS	Level of Severity
LUCE	Land Use and Circulation Element
LUO	Land Use Ordinance
MCL	maximum contaminant level
MEP	maximum extent practicable
MMT	million metric tons
MOA	memorandum of understanding
MPO	metropolitan planning organization
MW	megawatt

MWh	megawatt-hour
MWR	Master Water Report
NAHC	Native American Heritage Commission
NFIP	National Flood Insurance Program
NOA	naturally occurring asbestos
NOC	Notice of Completion
NOP	Notice of Preparation
NO_2	nitrogen dioxide
NOx	nitrogen oxide
NPDES	National Pollutant Discharge Elimination System
NRCS	Natural Resources Conservation Service
N_2O	nitrous oxide
OES	California Office of Emergency Services
OPR	Governor's Office of Planning and Research
OS	Open Space
O_3	ozone
PF	Public Facilities
PFC	perfluorocarbons
PG&E	Pacific Gas and Electric Company
PM	particulate matter (also PM_{10} and $PM_{2.5}$)
ppm	parts per million
ppb	parts per billion
Program	Renewable Energy Streamlining Program
PV	photovoltaic
RACM	regulated asbestos-containing material
RE	Renewable Energy
REC	Recreation
RESP	Renewable Energy Streamlining Program
RL	Rural Lands
RMS	Resource Management System
ROG	reactive organic gas
RoP	Rules of Procedure (Williamson Act)
RPS	Renewables Portfolio Standard
RR	Residential, Rural
RTP	Regional Transportation Plan
RWQCB	Regional Water Quality Control Board
SB	Senate Bill
SCCAB	South Central Coast Air Basin
SCS	Sustainable Communities Strategy
SEF	solar electric facilities
SF_6	sulfur hexafluoride
SIP	State Implementation Plan

SLO	San Luis Obispo
SLOAPCD	San Luis Obispo County Air Pollution Control District
SLOCFD	San Luis Obispo County Fire Department
SLOCOG	San Luis Obispo Council of Governments
SO_2	sulfur dioxide
SR	State Route
SRA	Sensitive Resource Area
SRRE	Source Reduction and Recycling Element
SWMP	stormwater management plan
SWPPP	stormwater pollution prevention plan
SWRCB	State Water Resources Control Board
TAC	toxic air contaminant
TDS	total dissolved solids
TMDL	total maximum daily load
USACE	US Army Corps of Engineers
USDA	US Department of Agriculture
USFWS	US Fish and Wildlife Service
USGS	US Geological Survey
VOC	volatile organic compounds
WECS	wind energy conversion system
WPA	water planning area