4 CUMULATIVE IMPACTS

4.1 INTRODUCTION TO THE CUMULATIVE ANALYSIS

This EIR provides an analysis of cumulative impacts of the 2035 Master Plan taken together with other past, present, and probable future projects producing related impacts, as required by Section 15130 of the California Environmental Quality Act Guidelines (State CEQA Guidelines). The goal of such an exercise is twofold: first, to determine whether the overall long-term impacts of all such projects would be cumulatively significant; and second, to determine whether the incremental contribution to any such cumulatively significant impacts by the project would be "cumulatively considerable," and thus significant. (See State CEQA Guidelines Sections 15130[a]–[b], Section 15355[b], Section 15064[h], and Section 15065[c]; and Communities for a Better Environment v. California Resources Agency [2002] 103 Cal. App. 4th 98, 120.) In other words, the required analysis intends first to create a broad context in which to assess cumulative impacts, viewed on a geographic scale beyond the project site itself, and then to determine whether the project's incremental contribution to any significant cumulative impacts from all projects is itself significant (i.e., "cumulatively considerable").

Cumulative impacts are defined in State CEQA Guidelines Section 15355 as "two or more individual effects which, when considered together, are considerable or which compound or increase other environmental impacts." A cumulative impact occurs from "the change in the environment which results from the incremental impact of the project when added to other closely related past, present, and reasonably foreseeable probable future projects. Cumulative impacts can result from individually minor but collectively significant projects taking place over a period of time" (State CEQA Guidelines Section 15355[b]).

Consistent with State CEQA Guidelines Section 15130, the discussion of cumulative impacts in this Draft EIR focuses on significant and potentially significant cumulative impacts. Section 15130(b) of the State CEQA Guidelines provides, in part, the following:

> [t]he discussion of cumulative impacts shall reflect the severity of the impacts and their likelihood of occurrence, but the discussion need not provide as great detail as is provided for the effects attributable to the project alone. The discussion should be guided by the standards of practicality and reasonableness and should focus on the cumulative impact to which the identified other projects contribute rather than the attributes of other projects which do not contribute to the cumulative impact.

A proposed project is considered to have a significant cumulative effect if:

- the cumulative effects of development without the project are not significant and the project's additional impact is substantial enough, when added to the cumulative effects, to result in a significant impact; or
- the cumulative effects of development without the project are already significant and the project contributes measurably to the effect.

The term "measurably" is subject to interpretation. The standards used herein to determine measurability are that the impact must be noticeable to a reasonable person or must exceed an established threshold of significance (defined throughout the resource sections in Chapter 3 of this EIR).

4.2 CUMULATIVE SETTING

4.2.1 Geographic Scope

The geographic area that could be affected by the project and is appropriate for a cumulative impact analysis varies depending on the environmental resource topic, as presented in Table 4-1. In general, local geographic area refers to the immediate project vicinity (e.g., the plan area and surrounding public viewpoints with respect to aesthetics). Regional, within the context of this EIR, refers to the County, but could refer to an applicable habitat conservation plan area or other regional plan area.

Table 4-1 Geographic Scope of Cumulative Impacts

Resource Topic	Geographic Area
Aesthetics	Local (plan area and surrounding public viewpoints)
Agricultural Resources	Regional (County)
Air Quality	Regional (San Luis Obispo County Air Pollution Control District—pollutant emissions that have regional effects) Local (immediate vicinity—pollutant emissions that are highly localized)
Archaeological, Historical, and Tribal Cultural Resources	Local (plan area and surrounding communities)
Biological Resources	Regional (County)
Energy	Regional (PG&E energy grid within City and County of San Luis Obispo)
Geology and Soils	Local (immediate project vicinity)
Greenhouse Gas Emissions	Global
Hydrology and Water Quality	Regional (watershed and groundwater basin) and Local (immediate project vicinity)
Noise	Local (immediate project vicinity)
Population and Housing	Regional and Local (plan area and surrounding communities within County)
Public Services and Recreation	Local (plan area and surrounding communities)
Transportation	Regional and Local (plan area and surrounding communities within County)
Utilities and Service Systems	Local (utility service areas)

Source: Compiled by Ascent Environmental in 2019.

As noted in Table 4-1, the potential geographic scope of some cumulative effects is more localized than others. To account for both regional and localized cumulative impacts, this EIR uses regional growth projections to assess regionally cumulative impacts and the list method to assess more localized cumulative impacts. Table 4-2 lists past, present, and future development projects in the vicinity of the campus. This list is not intended to be an all-inclusive list of projects in the region, but rather an identification of projects constructed, approved, or under review in the vicinity of the project area that have some relation to the environmental impacts of construction and operation of potential uses associated with implementation of the 2035 Master Plan. The list of projects is based on information obtained from the City of San Luis Obispo and includes projects within approximately 2 miles of campus within the City. No projects were identified within a 2-mile radius of campus in the unincorporated County of San Luis Obispo. However, several major projects/plans were identified outside of the 2-mile radius and were considered due to their potential for regionwide/countywide impacts. None of the non-Cal-Poly projects listed below are located within 750 feet of the Master Plan Area. Approved and pending Cal Poly projects that were considered part of the previous (2001) Master Plan but are currently in design or under construction are also listed in Table 4-2.

Table 4-2 Cumulative Projects List

Project Name	Developed or Proposed Land Use	Size (Acreage and/or Dwelling Units)	Status
Cal Poly			
Oppenheimer Family Equine Center	Agricultural	Riding arena, animal health center, events center	Planned for Construction
Center for Wine and Viticulture	Winery and academic	16,000 square feet of instructional space, 10,000 square feet dedicated to fermentation	Under Construction
Science and Agricultural Teaching and Research Complex	Academic	Faculty offices, conference and seminar rooms, lecture halls, classroom spaces	Under Construction
Vista Grande Dining Replacement	Restaurant	Three-story dining complex with six micro-restaurants	Under Construction
City of San Luis Obispo			
22 North Chorro	Mixed-Use (Residential/ Commercial/Retail)	27 residential units and approximately 2,000 square feet of commercial space	In Operation
71 Palomar Avenue	Residential	33-unit apartment complex	Under Construction
790 Foothill Mixed-use	Mixed-Use (Residential/ Commercial/Retail)	6,800 square feet, Four-story apartment complex (78 units, ground-floor commercial	Building Review
Montalban Mixed-Use	Mixed-Use (Residential/ Commercial/Retail)	430 square feet of commercial/retail and 15 residential units	Building Review
Olive Mixed-Use	Mixed-Use (Commercial/ Retail/Hotel)	24,000 square feet, five-story building with commercial/retail and 17 hotel rooms	Building Review
625 Toro	Residential	14 attached residential units	Under Construction
Los Padres Inn	Hotel	36-room hotel	Building Review
1185 Monterey	Mixed-Use (Residential/ Commercial)	2,464 square feet of commercial and 13 residential units.	Building Review
1105 Monterey	Mixed-Use (Commercial/Office)	27,079 square feet, three-story building with commercial/office space	Under Construction
956 Monterey Mixed-Use	Mixed-Use (Commercia/ Office/ Residential)	Three-story building with 4,000 square feet commercial/office space and 20 residential units	Planning Review
Ferrini Apartments	Residential	5 apartment units	Under Construction
Hotel SLO	Mixed-Use (Residential/ Hotel/Commercial)	25,000 square feet of commercial space, 30 residential units, 78-room hotel	Under Construction
Grenada Hotel Expansion	Hotel Expansion	Four-story addition to provide 22 additional rooms	Building Review
Marsh and Chorro Mixed-Use	Mixed-Use (Office/ Commercial/ Residential)	Seven-story building with 30,000 square feet of commercial/office space and 55 residential units	Planning Review
Hotel Cerro	Mixed-Use (Commercial/ Hotel/ Residential)	25,000 square feet of commercial space, 8 residential units, 64 hotel rooms	Under Construction
Monterey Place	Mixed-Use (Residential/ Commercial/Retail/Hotel)	29 residential units, three-room bed and breakfast, 12,255 square feet commercial/retail	Building Review
Palm Nipomo Parking Garage	Parking Garage	5,000 square foot parking structure	Planning Review
Hotel at the Creamery	Hotel	Four-story building, 47-room hotel, 6,698 square feet of commercial space	Building Review

Project Name	Developed or Proposed Land Use	Size (Acreage and/or Dwelling Units)	Status
San Luis Square	Mixed-use residential	Three four-story buildings with 19,792 square feet of commercial space, 63 residential units, 36 hotel rooms, and underground parking	Building Review
South Town 36	Mixed-Use (Residential/ Commercial)	36 residential units and 500 square feet of commercial space	Planning Review
Marsh & Carmel Mixed-Use	Mixed-Use (Commercial/ Residential)	Four-story building. 1,100 square feet commercial space and eight residential units	Under Construction
Monterey Hotel	Hotel	102-room hotel	Under Construction
Motel Inn	Hotel	55-room hotel, 13 recreational vehicle places, and 10 airstream spaces	Under Construction
545 Higuera Mixed-Use	Mixed-Use (Commercial/ Retail/ Residential)	Four-story building, 4,649 square feet of commercial/retail space, and 64 residential units	Planning Review
County of San Luis Obispo			
Envision Avila	Community Plan Update	Community plan to manage land uses and guide land use decisions in Avila for the next 20 years	Plan in progress
Los Osos Community Plan Update	Community Plan Update	Land use and transportation plan for Los Osos which determines how the community will grow and develop over the next 20 years	Draft EIR in progress
Oster/Las Pilitas Quarry	Aggregate Quarry	Aggregate quarry to extract 500,000 tons over 30 years on two parcels totaling 203 acres located at 6660 Calf Canyon Highway in Santa Margarita	Conditional Use Permit Application
Jack Ranch San Luis Obispo Agricultural Cluster Project	Residential	14 residences on 1-acre parcels, 163 acres of vineyards, 122 acres of open space, total of 299 acres	Planning Review Complete

Source: Data compiled by Ascent Environmental in 2019 based on data obtained from the City of San Luis Obispo, County of San Luis Obispo, and California Polytechnic State University (Cal Poly) in 2019.

4.3 ANALYSIS OF CUMULATIVE IMPACTS

The following sections contain a discussion of the cumulative effects anticipated from implementation of the 2035 Master Plan, together with related projects and planned development in the City and County of San Luis Obispo, and campus, for each of the 14 environmental issue areas evaluated in this EIR. The analysis conforms with Section 15130(b) of the State CEQA Guidelines, which specifies that the "discussion of cumulative impacts shall reflect the severity of the impacts and their likelihood of occurrence, but the discussion need not provide as great detail as is provided for the effects attributable to the project alone. The discussion should be guided by the standards of practicality and reasonableness and should focus on the cumulative impact to which the identified other projects contribute rather than the attributes of other projects which do not contribute to the cumulative impact."

When considered in relation to other reasonably foreseeable projects, cumulative impacts to some resources would be significant and more severe than those caused by the proposed project alone.

For purposes of this EIR, the project would result in a significant cumulative effect if:

- the cumulative effects of related projects (past, current, and probable future projects) are not significant and the incremental impact of implementing the 2035 Master Plan is substantial enough, when added to the cumulative effects of related projects, to result in a new cumulatively significant impact; or

- the cumulative effects of related projects (past, current, and probable future projects) are already significant and implementation of the 2035 Master Plan makes a considerable contribution to the effect. The standards used herein to determine a considerable contribution are that either the impact must be substantial or must exceed an established threshold of significance.

This cumulative analysis assumes that all mitigation measures identified in Chapter 3 to mitigate project impacts are adopted and implemented, and all elements of the design build performance criteria that would minimize environmental effects are implemented. The analysis herein analyzes whether, after implementation of project-specific mitigation and performance criteria that minimize environmental effects, the residual impacts of the project would cause a cumulatively significant impact or would contribute considerably to existing/anticipated (without the project) cumulatively significant effects. Where the project would so contribute, additional mitigation is recommended where feasible.

4.3.1 Aesthetics

The cumulative context for aesthetics and aesthetic resource impacts for the 2035 Master Plan include the existing and planned land uses on and around the campus, including the City and County of San Luis Obispo. Development of past and current projects and future proposed projects continue to alter the visual environment of Cal Poly, San Luis Obispo and the surrounding area. With few exceptions (as noted below), the visual resource impacts of the related projects listed above are site-specific and would not necessarily combine with other projects because they are not in the same viewshed. This is due, in part to the urban location of many of the related projects, as well as intervening terrain and vegetation.

The most prominent public views from campus are the views of the Chorro Valley, Santa Lucia Range, Cuesta Ridge, and the Morros. Given the nature of the 2035 Master Plan, associated buildings or structures would be intended to compliment, rather than detract, from the cumulative aesthetic experience. Through the design review process implemented by Cal Poly, new development would be visually compatible (e.g., with the same or similar visual character) with existing and new campus development. However, the impacts of further development near SR 1 within the West Campus subarea (e.g., the Farm Shop and University-Based Retirement Community), and development of the Slack and Grand project in the East Campus subarea, combined with potential development in the surrounding unincorporated County, could intensify the urban character of the region, reduce agricultural land and open space, further detract from long-distance views of the Morros from locations within the City, and damage scenic resources within a state scenic highway (University-Based Retirement Community). Collectively, past, present, and probable future projects result in a cumulatively significant impact on aesthetics and scenic resources.

Cumulative effects of lighting are visible over a wide area, because the collective lighting from development in close proximity can create skyglow, which would be considered a significant cumulative impact. Under existing conditions, the campus and surrounding areas experience lighting in the form of streetlights, illumination for paths, buildings, and other facilities and structures. As described in Impact 3.1-3, implementation of the 2035 Master Plan would introduce new lighting sources; however, while these fixtures would be similar in nature to existing lighting, implementation of Mitigation Measures 3.1-3a through 3.1-3c would reduce potentially significant impacts to less-than-significant levels. By preventing slight spillover through implementation of mitigation, development under the 2035 Master Plan would prevent contributions to additional skyglow, and therefore, would not be considered cumulatively considerable. Cumulative impacts would be less than significant with respect to skyglow.

Development under the 2035 Master Plan, in combination with cumulative development, could result in substantial changes to the local viewshed because it would further limit views of the Morros and surrounding mountains. While development would be designed to be compatible with the surrounding visual environment, it would further limit long-distance views in the area and would reduce the visual quality of the area. The 2035 Master Plan would therefore result in a cumulatively considerable contribution to cumulatively significant impacts on views of the West Campus subarea and the surrounding portion of unincorporated San Luis Obispo County. This would be a **significant and unavoidable** cumulative visual impact.

4.3.2 Agricultural Resources

The cumulative setting for agricultural resources includes the areas surrounding and adjacent to campus. Because a significant portion of the land surrounding campus, particularly along its western and northern borders includes Important Farmland (defined as prime farmland, unique farmland, and/or farmland of statewide importance), cumulative development of these lands would result in the conversion of these lands to non-agricultural uses. Between 2008 and 2016, approximately 375 acres of Prime Farmland in San Luis Obispo County were converted to non-agricultural uses. This conversion represents a loss of one percent of Prime Farmland in San Luis Obispo County in the last decade (California Department of Conservation 2016). Lands converted from agricultural use to non-agricultural use typically do not return to agricultural use at a later date but become part of a more urban condition. Therefore, the aggregate loss of such agricultural land in San Luis Obispo County is cumulatively significant.

The preservation of designated farmland outside of campus is the responsibility of the public agency in which the land is located. General Plans of the City and County of San Luis Obispo contain policies that encourage preservation of lands designated for agricultural uses and those that may be listed as important farmland under the Farmland Mapping and Monitoring Program. While the purpose of implementing Mitigation Measure 3.2-1 is to reduce impacts of urban development on designated agricultural lands, it does not fully mitigate the permanent conversion of Important Farmlands which would occur with the development of the Facilities and Operations Complex/interim surface parking lot. The 2035 Master Plan would limit further conversion of Important Farmland within Cal Poly's jurisdiction to no more than 10 acres by focusing the majority of development within the main campus, particularly the Academic Core and immediately surrounding areas, which do not contain Important Farmland, and otherwise supports the ongoing preservation of Important Farmland. The only exception to this is the Facilities Operations Complex/interim surface parking lot site which is relatively isolated from other campus agricultural facilities and has limited agricultural production and teaching potential. Nonetheless, conversion of this site to non-agricultural uses would further reduce total acreage of Important Farmland in the region and impacts would be cumulatively considerable. Due to the historic decline in available farmland in the region and the projected conversion of up to 10 acres of Important farmland as a result of the 2035 Master Plan, cumulative impacts on agricultural resources would be **significant and unavoidable**.

4.3.3 Air Quality

The cumulative context for air quality is both regional (San Luis Obispo County Air Pollution Control District [APCD]) for criteria pollutants and local for carbon monoxide (CO), toxic air contaminants (TAC), and odors. The proposed land uses under the 2035 Master Plan would result in an increase of emissions from area sources, stationary sources, and mobile sources. Cumulative development in the region will continue to increase the concentration of pollutants from traffic, natural gas combustion in buildings, area sources, and stationary sources, but would be partially offset by state and Federal policies that set emissions standards for mobile and non-mobile sources.

Further, as noted in Section 3.3, "Air Quality," APCD provides guidance for evaluating air quality impacts at both the project- and plan-level. In accordance with APCD guidance for plan-level CEQA analyses, the 2035 Master Plan was evaluated qualitatively for consistency with the most recently adopted air quality plan in the region. Specifically, the guiding principles and sustainability features of the Cal Poly 2035 Master Plan were compared to the land use and transportation control measures and strategies outlined in the *2001 Clean Air Plan* and was determined to be consistent with applicable air quality plans and would not result in cumulatively considerable contribution to cumulatively significant impacts.

In addition, APCD-adopted thresholds apply at the project level and are cumulative in nature; that is, they identify the level of project-generated emissions above which impacts would be cumulatively considerable. Thus, they represent the level at which emissions of a given project would impede the air basin from achieving ambient air quality standards, considering anticipated growth and associated emissions in that region. APCD has not established plan-level numeric thresholds. Nonetheless, for the reasons detailed in Section 3.3, a quantitative emission analysis was conducted to disclose short-term construction and long-term operational emissions associated with projects developed in accordance with the 2035 Master Plan.

SHORT-TERM CONSTRUCTION

San Luis Obispo County is in nonattainment for ozone and PM_{10} with respect to the California Ambient Air Quality Standards (CAAQS), and for ozone with respect to the National Ambient Air Quality Standards (NAAQS). Construction activities in the region would emit additional particulate matter and ozone precursors that may conflict with attainment efforts in the County. Because the region is in nonattainment, the existing cumulative condition is adverse and any additional emissions would exacerbate that condition. However, APCD has established construction emission thresholds for individual construction projects, which determine whether that particular project's emissions would be cumulatively considerable (SLOAPCD 2012). As detailed in Section 3.3, based on the most intensive likely construction schedule (which assumes multiple 2035 Master Plan projects would be under construction simultaneously), and application of the APCD's individual project emission thresholds to these projects, construction emissions of reactive organic gasses (ROG), oxides of nitrogen (NO_X), and particulate matter with an aerodynamic diameter of 10 microns or less (PM_{10}) could exceed the applicable mass emission thresholds established by APCD. Mitigation Measure 3.3-2 requires the incorporation of a menu of mitigation measures (derived from APCD guidance) into individual Master Plan projects that would reduce project-specific ROG, NO_X, and PM_{10} emissions. However, it is possible these mitigation measures would not reduce 2035 Master Plan emissions to a less-than-significant level. Therefore, should that occur, project construction emissions would be cumulatively considerable and the cumulative impact would be **significant and unavoidable**.

LONG-TERM OPERATION

From a plan-level perspective, the 2035 Master Plan would be consistent with the *2001 Clean Air Plan's* Land Use and Circulation Management Strategies, including planning compact communities; providing mixed land uses; balancing jobs and housing; promoting walking, biking, and transit use; and parking management. In addition, the 2035 Master Plan incorporates "smart growth" measures, such as the compact form around the Academic Core subarea and mixed land uses, which reduce reliance on cars and improve efficiency of infrastructure and energy use. The 2035 Master Plan allows for increased on-campus housing that would reduce commuting and its associated mobile-source emissions. The 2035 Master Plan also emphasizes a pronounced shift away from cars toward active transportation modes such as walking and biking. However, development of new uses, regardless of consistency with the plan would result in additional emissions within the cumulative context, and the following discussion focuses on whether those emissions would be cumulatively considerable.

Ozone impacts are the result of cumulative emissions from numerous sources in the region and transport from outside the region. Ozone is formed in chemical reactions involving NO_X, ROG, and sunlight. All but the largest individual sources emit NO_X and ROG in amounts too small to have a measurable effect on ambient ozone concentrations by themselves. However, when all sources throughout the region are combined, they can result in ambient concentrations of ozone that exceed the NAAQS and CAAQS.

PM_{10} and particulate matter with an aerodynamic diameter of less than 2.5 microns ($PM_{2.5}$) have similar regional cumulative impacts when particulates are entrained in the air and build to unhealthful concentrations over time. PM_{10} and $PM_{2.5}$ also have the potential to cause significant local problems during periods of dry conditions accompanied by high winds, and during periods of heavy earth disturbing activities. PM_{10} and $PM_{2.5}$ may have cumulative local impacts if, for example, several unrelated grading or earth moving activities are underway simultaneously at nearby sites. Operational PM_{10} and $PM_{2.5}$ are less likely to result in local cumulative impacts because operational sources of PM_{10} and $PM_{2.5}$ tend to be spread throughout the region (i.e., vehicles traveling on roads), not concentrating at any one receptor.

APCD has established operational emission criteria thresholds for individual projects beyond which a particular project's emissions would be cumulatively considerable (SLOAPCD 2012). A project that operates below the threshold levels is generally considered not to result in a cumulatively significant air quality impact, and those that operate above the thresholds would result in a cumulative impact.

As noted above, the 2035 Master Plan is consistent with applicable local air quality plans designed to reduce regional emissions. With the Master Plan, the level of emissions per service population (students, faculty, and staff) would go down through reduced vehicle miles traveled (VMT) and incorporation of modern, state-of-the-art building and facility design aimed at energy efficiency and other emission-reducing measures. Nonetheless, with implementation of the 2035 Master Plan, overall emissions of the campus would go up. As detailed in Section 3.3, an analysis was performed to quantify the potential operational emissions of development under the 2035 Master, which were compared to APCD's operational emission criteria thresholds for an individual project. This reflects a conservative analysis as it applies an individual project operational emission criteria to the total operational emissions resulting from all contemplated Master Plan projects. The analysis showed that the operation of the Master Plan projects (in total) will result in the generation of additional ROG, NO_X, and $PM_{10\ in}$, which are criteria emissions that form the basis for the region's non-attainment status and the existing adverse cumulative condition in the air basin. Although the 2035 Master Plan would not conflict with the policies and strategies in the local air quality plans, individual projects operating under the 2035 Master Plan could, in and of themselves, exceed the project-level operational emission thresholds developed and adopted by the APCD. Mitigation Measures 3.3-3a and 3.3-3b requires the incorporation of a menu of mitigation measures (derived from APCD guidance) into individual Master Plan projects that would reduce project-specific ROG, NOX, and PM10 operational emissions. However, it is possible these mitigation measures would not reduce a Master Plan development project emissions to a less-than-significant level. Should that occur, and with the additional emissions from cumulative development of all individual projects identified in Table 4-2, the Master Plan's air quality impacts would be cumulatively significant. As a result, the contribution of the project's operational emissions to the nonattainment status of San Luis Obispo County are considered to be cumulatively considerable. and the cumulative impact would be **significant and unavoidable**.

EXPOSURE TO POLLUTANT CONCENTRATIONS

Carbon Monoxide

Potential concentrations of CO, as noted in Impact 3.3-4, is a pollutant of localized concern because CO disperses rapidly with distance from the source under normal meteorological conditions. Thus, it is unlikely that the concentration of CO at a single receptor would be the result of more than one source of CO, unless many sources of CO are located close together (i.e., traffic congestion at a signalized intersection, potentially in excess of 35,000 vehicles per hour). The analysis under Impact 3.3-4, which examines whether vehicle trips generated from the 2035 Master Plan could result in localized CO concentrations that exceed the NAAQS and CAAQS, is inherently cumulative as screening levels identified by APCD are intended to determine if a project would result in a considerable contribution to the cumulative air quality condition. As discussed in Impact 3.3, the 2035 Master Plan would not trigger APCD screening levels as Master Plan vehicle trips are well below any CO thresholds and thus this impact would not be cumulatively considerable. This impact would be **less than significant**.

Toxic Air Contaminants

Toxic Air Contaminants (TACs), which are examined under Impact 3.3-5, are also pollutants of localized concern. High concentrations of TACs within urban areas may result from heavy vehicle traffic, industrial sources, or other sources, which when in close proximity to one another could result in unhealthy air quality conditions for nearby receptors, which would be considered a significant cumulative impact. However, due to the highly dispersive properties of TACs evaluated, emissions do not typically combine from construction or new stationary sources with other adjacent sources to result in cumulative impacts. Because of the localized nature of TACs and that project-generated TAC emissions would not be substantial, project-generated increases in TAC emissions would not be cumulatively considerable. Impacts would be **less than significant**.

ODORS

Emissions leading to odors adversely affecting a substantial number of people, which is examined under Impact 3.3-6, is also an impact of localized concern as odors dissipate rapidly with distance from the source. Construction of 2035 Master Plan projects and cumulative development would result in short-term increases in odorous emissions (i.e., vehicle exhaust) but these odors would be temporary and cease once construction of specific projects is complete. The 2035 Master Plan proposes construction of a water reclamation facility (WRF) on campus which could result in process emissions that generate odors. Mitigation Measure 3.3-6 would require Cal Poly to prepare an odor control plan that would be in place to reduce odor emissions and provide a mechanism for responding to any odor complaints. However, given the proximity of the WRF to onsite and future planned receptors, it is possible that the WRF could expose a substantial number of people to odors and a project-level significant impact would occur. Given the distance between the WRF and type and size of projects listed above in Table 4-2 and the local nature of odor impacts, odors generated from the WRF would not combine with other offsite odors from other cumulative development to create a cumulative impact. However, the WRF would be located near existing on-campus agricultural uses (e.g., onsite composting and cattle operations) which also are odor-generating land uses that could potentially combine with odors from the WRF. The addition of the WRF, even considering applicable mitigation, could result in odorous emissions that could combine with other onsite odor sources, resulting in a cumulatively significant odor impact. Because the WRF would be a major new facility that could expose people to offensive odors, when odors combine with existing odor sources, could result in increases of odor-related complaints and would be cumulatively considerable. As noted in Impact 3.3-6, implementation of an odor control plan at the WRF (Mitigation Measure 3.3-6) would be reduced to the extent feasible but the potential for odors from the WRF, in combination with other campus uses are known to generate odors, to be perceived by on-campus residents and within certain areas of the City would remain. As a result, impacts would be **significant and unavoidable**.

4.3.4 Archaeological, Historical, and Tribal Cultural Resources

The cumulative context for the cultural resources analysis considers a broad regional system of which the resources are a part. The cumulative context for historical resources is Cal Poly, the County of San Luis Obispo, and Central Coast where common patterns of historic-era settlement have occurred over roughly the past two centuries. The cumulative context for archaeological resources, human remains, and tribal cultural resources is the former territory of the Chumash, the Obispeño (after Mission San Luis Obispo de Tolosa), and the Salinan.

Because all significant cultural resources are unique and nonrenewable members of finite classes, meaning there are a limited number of significant cultural resources, all adverse effects erode a dwindling resource base. The loss of any one archaeological site could affect the scientific value of others in a region because these resources are best understood in the context of the entirety of the cultural system of which they are a part. The cultural system is represented archaeologically by the total inventory of all sites and other cultural remains in the region. As a result, a meaningful approach to preserving and managing cultural resources must focus on the likely distribution of cultural resources, rather than on a single project or parcel boundary.

Proper planning and appropriate mitigation can help to capture and preserve knowledge of such resources and can provide opportunities for increasing our understanding of the past environmental conditions and cultures by recording data about sites discovered and preserving artifacts found. Federal, state, and local laws are also in place that protect these resources in most instances. Even so, it is not always feasible to protect these resources, particularly when preservation in place would make projects infeasible, and for this reason the cumulative effects of past and present projects in the Central Coast could result in a potentially significant cumulative impact on cultural resources, including to human remains. Compliance with California Health and Safety Code Sections 7050.5 and 7052 and California Public Resources Code (PRC) Section 5097, as well as PRC Section 21080.3.2 and Section 21084.3 (a) and Cal Poly's continuing notification of the Northern Chumash Tribe and Torres Martinez Desert Cahuilla Indians of all projects, would require that treatment of the cultural and tribal cultural resources, including human remains, occurs in a manner consistent with the California Native American Heritage Commission guidance. Thus, the project's contribution to cumulative impacts to human remains would not be cumulatively considerable.

With regard to historic resources, the 2035 Master Plan does not presently propose to demolish or remove any existing known historic buildings or other resources, and to the extent any known historic buildings are remodeled, this would be done in compliance with the Secretary of the Interior Guidelines for the Rehabilitation, Reuse and Restoration of historic buildings as required by Mitigation Measure 3.4-1. Implementation of Mitigation Measures 3.4-1 would also require a historic structure report and evaluation of resources prior to ground-disturbing activities and would require all report recommendations be implemented to offset project impacts. However, it is possible that a historic building, feature, object, or structure, including those that have not yet been identified as historically significant and those that will become historically significant over the life of the Master Plan, would need to be demolished or altered in such a way that it would no longer convey its historic significance. This would cause a significant and unavoidable impact. With respect to archaeological resources, with implementation of Mitigation Measures 3.4-2a, 3.4-2b, and 3.4-2c, adverse effects on currently known archaeological resources and potentially newly discovered archeological resources would be avoided or mitigated. With implementation of these measures the project would not contribute to a cumulative loss of significant archaeological resources. Therefore, while impacts to archeological and tribal cultural resources will be avoided or mitigated to less than significant levels, the project's contribution to cumulative impacts on historic resources would be cumulatively considerable and impacts would be **significant and unavoidable**.

4.3.5 Biological Resources

Past development in San Luis Obispo County, ranging from conversion of land to agricultural production more than a hundred years ago to recent expansion of urban development, has resulted in a substantial loss of native habitat to other uses. This land conversion has benefited a few species, such as those adapted to agricultural uses, but the overall effect on native plants, animals, and habitat has been adverse. Although many future projects proposed in the vicinity of the campus would be required to mitigate significant impacts on terrestrial biological resources, in compliance with CEQA, the federal Endangered Species Act (ESA), California Endangered Species Act (CESA), and other state, local, and federal statutes, many types of habitats and species are provided no protection. Therefore, it can be expected that the loss of native habitat for plants and wildlife, agricultural lands, and open space areas that support important terrestrial biological resources in San Luis Obispo County will continue. Collectively, past, present, and probable future projects can result in a cumulatively significant impact on biological resources, and are considered collectively when determining a project's contribution to a cumulative effect.

As analyzed in Section 3.5, "Biological Resources," implementation of the 2035 Master Plan project could result in significant impacts to waters of the United States and waters of the state, special-status species (e.g., special-status plants, steelhead, California red-legged frog, tricolored blackbird and other nesting birds [including raptors], American badger, Monterey dusky-footed woodrat, special-status bats, western pond turtle, and coast range newt), non-native woodland, grasslands, and riparian habitats as a result of construction activities. Mitigation measures include provisions to reduce, avoid, and compensate for impacts in accordance with the requirements of ESA, CESA, and other regulatory programs that protect habitats, such as Clean Water Act (CWA) Section 404 and the Porter-Cologne Water Quality Act. Through full implementation of the mitigation measures, potential project-related impacts would be avoided, reduced, or compensated to such an extent that they would not result in a considerable contribution to a cumulative impact. Additionally, most of the permanent conversion and loss of habitat as a result of the 2035 Master Plan projects would be limited to already disturbed or previously converted habitats, and project implementation would not result in permanent habitat loss within surrounding open space. Therefore, the project would not result in a cumulatively considerable incremental contribution to a cumulatively significant biological resource impact; the cumulative impact would be **less than significant**.

4.3.6 Energy

The geographic area considered for cumulative impacts related to energy use includes the PG&E service area and campus. PG&E employs various programs and mechanisms to support provision of gas and electricity services to new development; to recoup costs of new infrastructure, connection fees are typically charged through standard billings for services.

Several other currently planned and approved projects identified in Table 4-2 would also receive electricity and natural gas service provided by PG&E. These projects would also consume energy related to transportation (i.e., gasoline and diesel consumption for passenger vehicles, trucks, buses, and other vehicles) and construction. These projects would be required to implement energy efficiency measures in accordance with the California Energy Code to reduce energy demand from buildings and would likely implement similar transportation demand management considerations to reduce vehicle trips and miles traveled, which would reduce fuel consumption. There is no evidence to suggest that implementation of cumulative development would result in wasteful or inefficient use of energy, and the cumulative energy impact would be less than significant.

As described above in Impact 3.6-1, according to Appendix F of the State CEQA Guidelines, the means to achieve the goal of conserving energy include decreasing overall per capita energy consumption, decreasing reliance on natural gas and oil, and increasing reliance on renewable energy sources. Impact 3.6-1 concludes that the project would not result in wasteful or inefficient use of energy and transportation-related fuel consumption per person would go down compared to existing conditions. Because the project would not result in wasteful or inefficient use of energy and not contribute to a significant cumulative impact, the project would not result in a substantial contribution to a significant cumulative impact. This impact would be **less than significant**.

4.3.7 Geology and Soils

Geologic and soils impacts are site-specific rather than regional in nature and any development occurring within campus would be subject to, at minimum, uniform site development and construction and regulatory standards relative to seismic and other geologic conditions that are prevalent within the region, such as the California Building Code standards. Therefore, cumulative geology and soils impacts would be **less than significant**.

4.3.8 Greenhouse Gas Emissions

The impact of greenhouse gas (GHG) emissions generated by Master Plan construction and operation, discussed under Impact 3.8-1 in Section 3.8, "Greenhouse Gas Emissions and Climate Change," is inherently cumulative. GHG emissions from one project cannot, on their own, result in changes in climatic conditions; therefore, the emissions from any project must be considered in the context of their contribution to cumulative global emissions, which is the basis for determining a significant cumulative impact, as noted in Section 3.8. However, projected GHG emissions associated with the 2035 Master Plan are consistent with CSU and state targets for GHG emissions reduction and applicable plans for the reduction of GHG emissions. Therefore, the 2035 Master Plan would not result in a considerable contribution to a significant cumulative GHG impact. Impacts would be **less than significant**.

4.3.9 Hydrology and Water Quality

WATER QUALITY AND STORMWATER DRAINAGE

Water quality in the region has degraded over time as natural habitat has been converted to urban uses, including within the Master Plan Area and the City and County, and these uses have resulted in runoff of various pollutants into local and regional waterways. A variety of programs have been implemented with the goal of halting degradation of water quality and reversing this trend. Several state and Federal agencies are involved in these programs, many of which are required by or originate in the federal Clean Water Act.

Construction activities associated with implementation of the 2035 Master Plan would expose bare soil to rainfall and stormwater runoff, which could accelerate erosion and cause downstream sedimentation. Development under the 2035 Master Plan would be required to comply with the campus construction stormwater protection program, which, as implemented by the Cal Poly Storm Water Pollution Prevention Program (SWPPP), includes Best Management Practices (BMPs) such as construction site runoff control to prevent soil and construction wastes from leaving the construction site and entering surface waters and the storm drain system. Further, the 2035 Master Plan and future

projects would be required to comply with the NPDES General Permit No. CAS000004 for Waste Discharge Requirements for Storm Water Discharges from Small Municipal Separate Storm Sewer Systems (MS4), which requires specific measures for site runoff control during construction and post-construction. These permits would ensure compliance with applicable laws and implementation of BMPs on the ground during construction.

Increase in campus population and campus facilities under the 2035 Master Plan would result in an increase in the amount of wastewater generated. Wastewater would be treated at the City's water resource recovery facility (WRRF) as well as the proposed WRF, to be constructed as part of the project. The City's WRRF and the proposed WRF would be required to comply with all applicable waste discharge requirements, including the National Pollutant Discharge Elimination System (NPDES) permit.

New impervious surfaces from development of the 2035 Master Plan would result in new sources of stormwater runoff and contamination, as well as an increased risk of erosion and sedimentation. However, development under the 2035 Master Plan, similar to the related project identified in Table 4-2, would be required to comply with the Cal Poly SWPPP, the Phase II Small MS4 Permit, which requires management of long-term stormwater discharges and implementation of pollution protection measures and the 2013 General Permit. Further, implementation of Mitigation Measure 3.9-3, which requires preparation of a Drainage Plan and Supportive Hydrologic Analysis for individual projects under the 2035 Master Plan, would further reduce the potential for onsite impacts under the 2035 Master Plan to be cumulatively considerable.

New development on campus would result in an overall increase in impervious surfaces and individual developments may require site-specific stormwater design features to ensure that the capacity of existing collection and detention/retention facilities would not be exceeded. Implementation of Mitigation Measure 3.9-3 would require drainage studies of projects proposed under the 2035 Master Plan and would ensure that necessary stormwater systems and/or on-site detention facilities would be engineered and constructed with appropriate sizing for anticipated storm events. This mitigation would reduce potential contribution of the 2035 Master Plan to less than cumulatively considerable.

Water quality regulations require implementation of construction and post-construction site specific BMPs and water quality protection measures. Therefore, the construction and operation of uses under the 2035 Master Plan and the construction and operation of the related projects identified in Table 4-2 would reduce site-specific water quality impacts such that cumulatively adverse hydrology and water quality impacts would not occur. The project would not have a considerable contribution such that a new significant cumulative impact would occur. The cumulative impact would be **less than significant**

GROUNDWATER SUPPLY AND RECHARGE

As noted in Section 3.9, "Hydrology and Water Quality," the San Luis Obispo Valley Basin, a regional groundwater basin over which lies a portion of the West Campus Subarea, has been designated as a high priority basin for development of a sustainable groundwater management plan, which indicates a potential cumulative overdraft of groundwater supplies. While implementation of the 2035 Master Plan would not increase groundwater withdrawals from the basin or elsewhere within the Master Plan Area, construction of Master Plan projects on currently undeveloped, unpaved, or uncompacted sites could have a modest effect on infiltration of rainfall and runoff to the underlying San Luis Obispo Valley Groundwater Basin. However, Mitigation Measure 3.9-3 would require a drainage plan and appropriate measures to ensure proposed development and redevelopment projects do not interfere substantially with groundwater recharge, reducing the potential contribution of the 2035 Master Plan to less than cumulatively considerable.

As noted in Sections 3.9, "Hydrology and Water Quality' and 3.14, "Utilities and Service Systems," Cal Poly will continue to withdraw approximately 120 acre-feet per year of groundwater from the seven campus wells in the deep aquifer for agricultural uses. No element of the 2035 Master Plan would result in increased groundwater withdrawal and no additional groundwater use or pumping is proposed. As a result, the 2035 Master Plan would not impede the sustainable management of the groundwater basin. As the project's contribution to the cumulative impact would not be cumulatively considerable, impacts would be **less than significant**.

FLOODPLAIN

Within the county, localized floods are typical after periods of sustained rain, especially within low-lying areas and near creeks. Development within these areas can be affected by flood flows, and depending on the use type, there is a risk of release of pollutants, which would be considered a significant cumulative impact. As noted in Section 3.9, "Hydrology and Water Quality," portions of the Master Plan Area are located within the 100-year floodplain (primarily around existing creeks and drainages), however, any new development proposed within the floodplain would be required to incorporate flood-proofing design measures to ensure that water quality and/or risks associated with flooding do not occur. The 2035 Master Plan may involve construction of additional academic and administrative facilities within these flood hazard zones, resulting in the risk of release of pollutants (e.g., oil, pesticides, herbicides, sediment, trash, bacteria, and metals) if a flood event were to occur. However, Mitigation Measure 3.9-7 would require that, if buildings are constructed within the 100-year flood zone, they would be placed above the 100-year flood elevation, to avoid potential impacts associated with flooding. Implementation of the aforementioned measure would ensure that development under the 2035 Master Plan would not be cumulatively considerable with respect to risks associated with a 100-year flood event. Therefore, cumulative impacts related to flooding would be **less than significant**.

4.3.10 Noise

Noise is typically considered a local impact because noise levels dissipate rapidly with increased distance from the source. When discussing increases in noise levels, a doubling of a noise source is necessary to result in a 3-dB (i.e., audible) increase. Thus, for cumulative noise impacts to occur, noise sources must combine to result in increases in noise at the same receptor that otherwise would not experience the increase attributed to the combined (or cumulative) condition.

CONSTRUCTION-GENERATED NOISE

Construction-related noise and vibration are typically considered localized impacts, affecting only receptors closest to construction activities. Therefore, unless construction of cumulative projects, including those proposed under the 2035 Master Plan, occur in close proximity to each other (i.e., less than 500 feet) and at the same time, noise and vibration from individual construction projects have little chance of combining to create cumulative impacts. For these reasons, cumulative noise and vibration impacts from construction are generally less than significant.

Noise and vibration associated with construction of new buildings and campus facilities associated with the 2035 Master Plan would be intermittent, temporary, and would fluctuate over the years as new buildings are constructed and existing buildings are maintained or repaired. In addition, mitigation measures are in place that would generally limit construction noise to the less-sensitive times of the day, and construction activities would implement construction noise- and vibration-reducing measures that would minimize construction noise and vibration, further reducing the chances for disturbing people.

Given that construction activities associated with 2035 Master Plan implementation would be dispersed throughout the entire campus, none of the off-campus projects listed in Table 4-2 are located within 500 feet of the Master Plan Area, construction activities would not readily combine with construction noise and vibration from other construction activities in the area to result in a substantial increase in cumulative noise and vibration levels. Furthermore, as on-campus projects listed in Table 4-2 would likely be completed by the time construction under the 2035 Master Plan occurs, the potential construction-generated noise and vibration impacts of those projects are not cumulatively considerable with the 2035 Master Plan. As such, construction noise and vibration, in general, would not be cumulatively considerable, and impacts would be **less than significant**.

OPERATIONAL NOISE

As discussed in Section 3.10, "Noise," project-related traffic increases would not result in a substantial noise increase on affected roadways (i.e., less than 1 dB). Refer to Table 3.10-20 for further information. Based on the project list provided in Table 4-2, vehicle roadway volumes are not anticipated to double, which would indicate a potential cumulative roadway noise impact. Therefore, even though traffic in the project vicinity is expected to increase under cumulative conditions, the project's contribution would not be cumulatively considerable, and impacts would be **less than significant**.

New development associated with the related projects listed in Table 4-2, as well as the 2035 Master Plan, would include stationary equipment associated with new sporting and special events, parking facilities, and building mechanical equipment. However, noise from these sources would be localized and would not combine with noise sources from other related projects in the project area due to a minimum 500-foot distance between sources. Further, mitigation is included as part of the 2035 Master Plan that would require that sport facilities, parking structures, stationary equipment, and the like is designed and located in such a way that noise is minimized at the nearest receptors. Increases in operational stationary noise sources would not combine with other area sources to result in a substantial increase in cumulative noise. This impact would not be cumulatively considerable. With respect to the siting of new sensitive receptors near existing noise sources, impacts associated with the location of new receptors on campus and the resulting exposure to sporting events on campus or parking structures, is site-specific and not cumulatively considerable. The impact would be **less than significant**.

4.3.11 Population and Housing

As described in Section 3.13, "Population and Housing," population within the County, including the City, has increased by 3.9 percent since 2010 (refer to Table 3.11-1). In addition, the county's housing vacancy rate has been consistently higher than the state's vacancy rate, while the City's housing vacancy rate has generally remained at just over five percent. Implementation of the 2035 Master Plan would allow a substantial increase in student and faculty growth but would also accommodate a commensurate increase in campus housing. Under the 2035 Master Plan, student enrollment is projected to increase by 3,188, while on-campus student housing is projected to increase by 7,238 beds. Thus, Cal Poly would provide more student housing on-campus with implementation of the 2035 Master Plan than the anticipated growth in the student enrollment. While providing additional capacity could be considered growth inducing, the provision of additional housing would allow for more of the existing student body (21,812 existing students) to live on-campus and reduce off-campus housing demand.

With respect to employees, Cal Poly faculty/staff could increase by 669 employees with implementation of the 2035 Master Plan. The 2035 Master Plan includes the construction of on-campus workforce housing for approximating 800 faculty/staff and families. In addition, the proposed retirement community would provide housing for approximately 250 retired Cal Poly faculty, staff, alumni and community members. Similar to student housing, the increase in on-campus faculty/staff housing would more than accommodate the projected employee growth, providing housing for existing faculty/staff to live on campus and housing for the local retirement community and reduce off-campus housing demand.

As noted in Section 3.13, "Population and Housing," the 2035 Master Plan, in and of itself, would increase demand for on-campus housing, which would be accommodated as part of the project, and temporarily (until 2022) increase demand for student housing off-campus for approximately 200 students. However, based on the local and regional housing vacancy rates of 6.3 percent (1,340 vacant units) and 12.3 percent (15,015 vacant units) within the City and County, respectively, the project would not represent a substantial contribution to potential housing demand or consume a substantial portion of the available housing stock. Further, of the cumulative projects listed in Table 4-2 above, 451 new residential units are reasonably foreseeable within two miles of the Master Plan Area and within the City and would more than accommodate the projected temporary increase in demand for student housing that may occur until 2022. For these reasons, the population and housing impacts related to implementation of the 2035 Master Plan would not result in a considerable contribution to cumulative population and housing impacts, and impacts would be **less than significant**.

4.3.12 Public Services and Recreation

PUBLIC SERVICES

Under existing conditions, public services are provided in the plan area and surrounding area by multiple agencies, including the San Luis Obispo City Fire Department, City of San Luis Obispo Police Department, Cal Poly University Police Department, San Luis Obispo County Fire Department and Cal Fire. As described in Chapter 3.12, "Public Services," police and fire services are shared between the City, County, and Cal Poly through various agreements, including the Automatic Aid agreement for fire service between the City and County/Cal Fire. School services are primarily provided by San Luis Coastal Unified School District (SLCUSD). As noted by the projects listed in Table 4-2, cumulative development in the region continues to increase the concentration of people and structures within these local public service jurisdictions which in turn increases demand for such services.

The increase in population under the 2035 Master Plan could continue the trend of increasing the demand for public services and could combine with other proposed development projects within the City listed in Table 4-2 to result in a cumulative increase in demand for public services such that new or physically altered governmental facilities would be required to maintain acceptable service ratios, response times, or other performance objectives and the construction of which could cause significant environmental impacts. As noted in Section 3.12, "Public Services," it is not anticipated that new or expanded public facilities would be required to accommodate development under the 2035 Master Plan. Further, the new development and growth listed in Table 4-2 would occur within existing developed areas where adequate public services currently exist. To the extent that any potential expansion of public facilities is required to accommodate new development and growth in the area, it is reasonable to assume that these would be expansions of existing facilities, or new facilities in already developed areas which would typically be exempt from CEQA review as infill development. The other development projects listed in Table 4-2 would also be required to pay impact fees consistent with local jurisdiction requirements, including the City and SLCUSD, to ensure the adequate provision of public services, including schools, in the future. Nonetheless, the 2035 Master Plan would not expand service areas nor is it anticipated to require additional facilities/services, and therefore, the impact of the project on public services would not be considered cumulatively considerable. Cumulative impacts to public services would be **less than significant**.

RECREATION

The cumulative context for recreation facilities includes the County, City, and Cal Poly. Past and present development has resulted in an increase in demand for recreation resources and a subsequent dedication of parklands and open space consistent with state and local plans and policies. This has increased the number of developed parklands, trails, and recreational facilities, and the amount of preserved open space within the surrounding County, City, and campus. As detailed in Section 3.12, "Public Services and Recreation," the 2035 Master Plan would increase the level of recreational opportunities on campus for students and local residents.

Nonetheless, the increase in population under the 2035 Master Plan would continue the trend of increasing the demand for recreational resources and could combine with other proposed development projects within the city and unincorporated county to result in a cumulative increase in the use of existing recreational resources, which could be cumulatively significant. Although the Quimby Act, which applies to cities and counties in the context of approval of residential subdivisions, does not apply to Cal Poly, its parkland standard of 3 acres per 1,000 persons is a reasonable metric by which to assess impacts of the 2035 Master Plan on parks and recreation. The 2035 Master Plan would provide an increase in outdoor recreational space from 63.9 acres to 82.5 acres and would provide 4.7 acres of recreational lands per 1,000 persons, in consideration of the net increase in campus population. Thus, although Cal Poly is not subject to the standards of the Quimby Act, the increase in recreational facilities/areas under the 2035 Master Plan would be consistent with the Quimby Act and would offset the incremental increase in recreational facility demand associated with implementation of the 2035 Master Plan. The increase in on-campus recreational lands would reduce impacts to regional recreation facilities in the county and city. Other new developments in the city and unincorporated county are required to pay fees to mitigate for increased park demands in accordance with

the Quimby Act (California Government Code Section 66477), to offset maintenance and construction of recreation facilities in response to increases in population. While some use of off-campus recreational facilities by students and faculty is likely, the highest demand is expected to come from students living off-campus. Under the 2035 Master Plan, the on-campus housing population would exceed increased enrollment, and it is anticipated that the new on-campus residents would primarily use the available on-campus recreational facilities. Thus, there is no evidence to suggest that such use would contribute substantial physical deterioration of off-campus recreational facilities.

For the reasons described above, the 2035 Master Plan would not result in a cumulatively considerable contribution such that a significant cumulative recreation impact would occur.

4.3.13 Transportation

VEHICLE MILES TRAVELED

Existing region-wide and project-generated VMT was calculated using the San Luis Obispo Council of Governments (SLOCOG) regional traffic model. The model uses land use alternatives of various developments, such as the 2035 Master Plan and the projects listed in Table 4-2, as an input and, using San Luis Obispo region's transportation network, predicts various measures of transportation conditions, such as VMT, through trip assignments within the region's transportation network based on standardized trip generation rates and other factors for those land uses. As further explained in Section 3.13, "Transportation," the SLOCOG model, due to its consideration of the strong rural character of the County, was used to present a more conservative analysis of potential VMT per capita. Due to land use assumptions inherent to the SLOCOG model, VMT estimates are generally higher than compared to the VMT estimates that would be generated using the City's VMT model. The City's VMT model would have considered land use information of the citywide model, which accounts for additional vehicle travel efficiencies associated with increased density within the city, thereby resulting in a lower estimate of campus VMT. With respect to campus, Cal Poly demographics and the nature of campus uses [e.g., high proportion of on-campus housing, relatively high use of alternative transportation] would generate fewer VMT per capita as compared to the SLOCOG region as a whole. Nonetheless, because there are students, faculty and staff who reside off-campus and outside the City of San Luis Obispo, use of the SLOCOG model was considered the most conservative and therefore appropriate model.

The model also includes growth factors based on adopted growth plans for various municipalities within the county that can be used to predict future (i.e., cumulative) transportation conditions. The cumulative impact associated with implementation of the 2035 Master Plan is evaluated using the growth factors, as well as the geographical boundary method for estimating VMT, which captures all VMT on a roadway network within a specified geographic area, including local trips plus interregional travel that does not have an origin or destination within the area. This method considers traffic within the physical limits of the selected study area for which most of the campus trips occur. VMT estimated in this way is a more complete evaluation of the potential effects of the project because it captures the combined effect of new VMT, shifting VMT to and from other neighborhoods, and/or shifts in existing traffic to alternate travel routes or modes. The cumulative VMT is divided by the service population (residents plus employees) to distinguish the effects of population and/or employment growth from the effects of changes in personal travel behavior.

The methodology for establishing a VMT significance threshold for the project is consistent with and based on the guidance provided within the CSU Transportation Impact Study Manual (TISM). As detailed in the CSU TISM, cumulative impacts are analyzed according to whether a project would increase or decrease the forecasted regional VMT per capita to determine if a project would result in a significant transportation impact. Therefore, the contribution of the 2035 Master Plan would be cumulatively considerable, as it relates to VMT, if it meets the following criteria:

- project-generated VMT, in the cumulative scenario, per service population for the campus as a whole exceeds the forecasted county VMT per service population (i.e., 26.22).

Under cumulative conditions, the VMT per service population generated for the San Luis Obispo region as a whole, both with and without implementation of the 2035 Master Plan, are presented in Table 4-3.

Table 4-3 Cumulative Plus Project VMT

	Cumulative Conditions	Cumulative with Project Conditions
San Luis Obispo County		
Vehicle Miles Traveled (D)	12,703,200	12,740,000
Service Population (E)	484,400	516,300
VMT per Service Population (D/E = F)	26.22	24.68

Notes:

[1] Rounded service population and VMT to nearest 100.

[2] Service population is defined as the sum of all employees, residents and students.

Source: Data compiled and provided by Fehr & Peers 2019.

As shown on Table 4-3, VMT per service population for the San Luis Obispo region under cumulative conditions, with implementation of the 2035 Master Plan, is projected to decrease from 26.22 to 24.68. Therefore, the countywide VMT per service population with the project would not exceed the countywide VMT per service population (i.e., 26.22) without the project. Accordingly, the 2035 Master Plan would not result in a considerable contribution to a significant VMT impact. Impacts would be **less than significant**.

TRANSIT SERVICE AND FACILITIES, BICYCLE FACILITIES, AND PEDESTRIAN FACILITIES

Campus development identified in the 2035 Master Plan would occur incrementally over time. Combined with other cumulative development in the area, the need for transit service and facilities, bicycle facilities, and pedestrian facilities is anticipated to increase. With the current trend of emphasizing alternative modes of travel, the cumulative growth of the region, including the 2035 Master Plan and the projects listed in Table 4-2, could exceed the capacity of existing facilities, which would be considered a significant cumulative impact. However, through continued implementation of Mitigation Measures 3.13-2, 3.13-3, and 3.13-4, bi-annual monitoring of existing facilities and assessment of the potential need for further facility improvements to allow for additional capacity, followed by implementation of those improvements, would reduce the contribution of the 2035 Master Plan to less than cumulatively considerable levels. Therefore, implementation of Mitigation Measures 3.13-2 through 3.13-4 would reduce potential significant impacts associated with transit service and facilities, bicycle facilities, and pedestrian facilities under the 2035 Master Plan that might occur under cumulative conditions to a **less than significant** level by ensuring that service and facilities are sufficient to accommodate demand, minimizing potential adverse effects on operations, and minimizing conflicts between all travel modes.

4.3.14 Utilities and Service Systems

The cumulative context for water supply/treatment/distribution and wastewater collection/treatment is based on the various agreements between Cal Poly, the City of San Luis Obispo, and other entities. The cumulative context for solid waste is San Luis Obispo County, and the cumulative context for electricity and natural gas facilities is the service area for each utility.

WATER SUPPLY AND INFRASTRUCTURE

Section 3.14, "Utilities and Service Systems" describes the existing and future conditions of water supply and the need for new and expanded water infrastructure. As noted in that section, there are existing agreements between the Whale Rock Commission, the City of San Luis Obispo, Cal Poly, and the California Men's Colony related to water supplies from Whale Rock Reservoir; and, with respect to conveyance and treatment, Cal Poly and the City of San Luis

Obispo have existing agreements related to infrastructure. In general, because Cal Poly is assured a specific volume of water from Whale Rock reservoir and will accommodate growth through that supply, additional conservation, and in lieu supply through construction of the WRF, Cal Poly's water demand will not cumulatively combine with demands from new developments in the city or county. Refer to Section 3.14, "Utilities and Service Systems," for further clarification.

As discussed under Impact 3.14-3, development under the 2035 Master Plan would result in increased population levels and development of new buildings, which would increase water demands. With consideration of campus water demand reduction through conservation measures and development of the proposed WRF, future demands could be met. However, the WRF must be constructed such that the first phase is completed in 2022 and second phase is completed in 2028 to ensure that water demands remain consistent with (i.e., do not exceed) Cal Poly's existing agreements, including those with the City of San Luis Obispo. However, the design, timing, and other details of the WRF are not yet established, so it cannot be determined with certainty that water supplies would be available to meet increased demand from implementation of the 2035 Master Plan. Implementation of Mitigation Measure 3.14-3 establishes a performance criterion, related to construction and operation of the WRF, for near-term projects that requires adequate water supplies to be available to support Cal Poly through 2035. Because near-term projects would not be constructed without demonstration of adequate water supplies, cumulative impacts would be less than significant.

As discussed under Impact 3.14-1, water originating from Whale Rock Reservoir is pumped to the City's treatment plant and conveyed through City pipelines to Cal Poly. Implementation of the 2035 Master Plan would increase the quantity of water conveyed through the existing City connections. Modeling efforts indicate that there is adequate potable conveyance capacity to accommodate anticipated development associated with the 2035 Master Plan under average day demand, peak daily demand, and peak hourly flow. As it relates to on-campus pipelines and other infrastructure associated with development under the 2035 Master Plan, it is reasonable to assume that new facilities would be placed in areas where water supply utility infrastructure is available, such as adjacent to other developed uses. Thus, the 2035 Master Plan would not be cumulatively considerable when considered together with the projects listed in Table 4-2, and therefore cumulative impacts related to new or expanded water infrastructure would be **less than significant**.

WASTEWATER TREATMENT

Section 3.14, "Utilities and Service Systems" discusses the existing and future conditions of wastewater treatment capacity. This impact is cumulative in nature because Cal Poly and the City of San Luis Obispo have existing agreements related to treatment conveyance and capacity. Similar to the assessment of water supply and infrastructure above, because Cal Poly is assured a specific volume of wastewater conveyance and treatment, the University's wastewater generation will not cumulatively combine with demands from developments in the city or county.

Under the 2035 Master Plan, construction and operation of proposed buildings and increased campus population would increase wastewater generation. Several actions are proposed, however, to reduce per-capita wastewater generation, including replacing toilets, urinals, faucets, and showerheads with low-flow alternatives. Cal Poly proposes, as part of the 2035 Master Plan, to construct a WRF to treat up 339,242 gallons per day of campus-generated wastewater, which, along with ongoing waste water treatment at the City's WRRF pursuant to existing contracts, would meet the 2035 Master Plan's wastewater treatment needs, as described in Section 3.14, "Utilities and Service Systems." However, the timing and other details of the WRF is unknown and planned conservation actions may not be sufficient to reduce wastewater flows such that capacity of the wastewater collection conveyance system would be available to accommodate waste water treatment needs after the year 2030 and potential increases in peak wet weather flows through the life of the 2035 Master Plan. Implementation of Mitigation Measures 3.14-4(a) establishes a performance criterion which requires that Cal Poly demonstrate that adequate waste water treatment capacity is available to serve each Master Plan project through the construction of the WRF, through contractual treatment rights at the City's WRRF and/or through conservation or other flow reduction measures. In addition, Mitigation Measure 3.14-4(b) requires the design, planning and implementation of other wastewater flow reduction

measures (including replacement of aging pipes to reduce inflow and infiltration (I/I)), such that peak wet weather flows to the City's WRRF would not increase beyond 2018/2019 levels. As a result, the project contribution would not be cumulatively considerable as it would not add additional flows to the City's existing wastewater collection and treatment system in excess of existing contractual rights or peak wet weather conditions. Therefore, impacts related to wastewater treatment and collection capacity would be **less than significant**.

ELECTRICITY, NATURAL GAS, AND TELECOMMUNICATIONS FACILITIES

As noted in Section 3.14, "Utilities and Service Systems," electricity, natural gas, and telecommunications services are currently provided by Pacific Gas & Electric (PG&E), the California Department of General Services, and Cal Poly's Information Technology Services, respectively. As development within an area occurs, such as the projects listed in Table 4-2, these service providers typically incorporate their development into their assessment of their associated infrastructure. Nonetheless, development under the 2035 Master Plan, in combination with the projects listed in Table 4-2, would result in an increase in electrical, natural gas, and telecommunications demands. However, during the aforementioned assessments, utility providers periodically consider the need to purchase more resources and upgrade/expand infrastructure. In addition, Cal Poly is currently in the processes of preparing a Utility Master Plan, which will detail the need and design for upgraded and expanded energy infrastructure associated with the 2035 Master Plan. Impacts related to construction of the infrastructure projects are evaluated in the relevant resources section (e.g., biological resources, cultural resources, hydrology and water quality) of this EIR. With inclusion of relevant mitigation measures, project-specific impacts would be reduced and incremental contributions of construction-related effects from infrastructure improvements would be less than cumulatively considerable. Thus, cumulative impacts would be **less than significant**.

SOLID WASTE

Generally, the capacity of solid waste facilities in San Luis Obispo County is continually declining as cumulative development and ongoing disposal reduces remaining capacity. However, the three regional landfills located near Cal Poly can accommodate up to 2,600 tons per day of solid waste with a total remaining capacity of 25,000,000 cubic yards and none of these landfills are anticipated to close prior to 2039. As a result, the projected 3-ton-per-day increase in solid waste disposal needs associated with implementation of the 2035 Master Plan would not be cumulatively considerable. In addition, and as discussed in Section 3.14, "Utilities and Service Systems," a significant portion of the waste stream generated at Cal Poly is diverted from landfills through recycling, composting, and donating/reselling efforts. Currently, approximately 85 or more percent of waste generated at Cal Poly is diverted from landfills. As per CSU sustainability policy, Cal Poly must achieve an 80 percent reduced waste diversion rate by the year 2020 (and at more than 85 percent the university is ahead of schedule) and then continue toward zero waste by 2040. This would effectively result in a decrease in the total amount of Cal-Poly-related solid waste, including that associated with the 2035 Master Plan, disposed of at landfills in the short-term, and no contribution to landfill volumes in the long-term. Thus, contribution of the 2035 Master Plan to cumulative impacts on capacity of solid waste facilities would not be cumulatively considerable, and cumulative impacts would be **less than significant**.

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