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ADDENDUM

Merced Vision 2030 General Plan Program Environmental Impact Report for the UC Merced Annexation Project

Prepared for:



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ATTACHMENT D

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Program Environmental Impact Report
for the
UC Merced Annexation Project

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December 2022

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LIST OF ABBREVIATIONS

AB	Assembly Bill
ACTM	Airborne Toxic Control Measures
AF	acre-feet
CAL FIRE	California Department of Forestry and Fire Protection
CALGreen	California Green Building Code
CARB	California Air Resources Board
CDFW	California Department of Fish and Wildlife
CEQA	California Environmental Quality Act
City	City of Merced
CO	carbon monoxide
CO ₂	carbon dioxide
CRHR	California Register of Historical Resources
EIR	environmental Impact report
FHSZ	Fire Hazard Severity Zones
GP PEIR	<i>Merced Vision 2030 General Plan Program Environmental Impact Report</i>
GSA	groundwater sustainability agencies
gsf	gross square feet
GSP	groundwater sustainability plan
HCP	Habitat Conservation Plan
LOS	level of service
LRA	Local Responsibility Area
LRDP	Long Range Development Plan
Mgal/d	million gallons per day
mgd	million gallon per day
MID	Merced Irrigation District
MTCO ₂ e/year	metric tons of carbon dioxide equivalent per year

NCCP	Natural Community Conservation Plan
NO _x	nitrous oxide
NRHP	National Register of Historic Places
PM ₁₀	coarse particulate matter
PM _{2.5}	fine particulate matter
PRC	Public Resources Code
project	proposed annexation
RACT	Reasonably Available Control Technology
ROG	reactive organic gas
SB	Senate Bill
SGMA	Sustainable Groundwater Management Act
SJVAPCD	San Joaquin Valley Air Pollution Control District
sq. ft.	square feet
SRA	State Responsibility Area
SUDP/SOI	Specific Urban Development Plan/Sphere of Influence
SWPPP	storm water pollution prevention plan
U.S. DOT	U.S. Department of Transportation
UC Merced	University of California, Merced
UC	University of California
UCLC	University of California Land Company LLC
UCP	University Community Plan
USACE	U.S. Army Corps of Engineers
USFWS	U.S. Fish and Wildlife Service
UWMP	Urban Water Mater Plan
VMT	vehicle miles traveled
VST	Virginia Smith Trust

ADDENDUM TO THE MERCED VISION 2030 GENERAL PLAN PROGRAM ENVIRONMENTAL IMPACT REPORT FOR ANNEXATION OF UC MERCED

State Clearinghouse Number 2008071069

BACKGROUND AND ACTION TRIGGERING THE ADDENDUM

This document serves as an addendum to the *Merced Vision 2030 General Plan Program Environmental Impact Report* (GP PEIR), which considers the environmental effects of implementing the General Plan through the 2030 planning horizon. One of the primary purposes of the Merced Vision 2030 General Plan adopted in January of 2012 was to update and expand the City of Merced's (City's) Specific Urban Development Plan/Sphere of Influence (SUDP/SOI) to include the University of California, Merced (UC Merced) campus, adjacent University Community, and other areas within the planning area (City of Merced 2010).

The GP PEIR includes a preliminary analysis of the potential effects of annexing UC Merced into the City based on the 2009 Long Range Development Plan (LRDP) for UC Merced and the annexation agreement maintained between the City and UC Merced. The Merced Vision 2030 General Plan includes Policy UE-1.4 related to continuation of joint planning efforts and Policy UE-1.5 to promote annexation of developed areas in the City's SUDP/SOI during the planning period. Although the UC Merced campus is within the City's SUDP/SOI, annexation of UC Merced had not been permissible pursuant to the Cortese-Knox-Hertzberg Local Government Reorganization Act of 2000 because the UC Merced campus is not contiguous with the incorporated city. In September 2020, legislation was passed unanimously by both the State Assembly and the Senate that recognizes the unique circumstances surrounding the UC Merced annexation. Assembly Bill (AB) 3312 allows the City to annex the UC Merced campus along a road strip (Bellevue Road or Lake Road) without the adjoining properties between UC Merced and the city limits. In February 2021, the Merced City Council directed City staff to proceed with the annexation of the UC Merced campus to the City under the terms of AB 3312.

As the lead agency under the California Environmental Quality Act (CEQA), the City has determined that the proposed annexation warrants the preparation of an addendum in accordance with Section 15164 of the State CEQA Guidelines. This addendum builds upon the GP PEIR analysis and evaluates the proposed annexation of UC Merced for potential to change the conclusions of the GP PEIR.

CALIFORNIA ENVIRONMENTAL QUALITY ACT GUIDELINES REGARDING AN ADDENDUM TO AN ENVIRONMENTAL IMPACT REPORT

Altered conditions, changes, or additions to the description of a project that occur after certification of an environmental impact report (EIR) may require additional analysis under CEQA. The legal principles that guide decisions regarding whether additional environmental documentation is required are provided in the State CEQA Guidelines, which establish three mechanisms to address these changes: a subsequent EIR, a supplement to an EIR, and an addendum to an EIR.

Section 15162 of the State CEQA Guidelines describes the conditions under which a subsequent EIR would be prepared. In summary, when an EIR has been certified for a project, no SEIR is required unless the lead agency determines, on the basis of substantial evidence in light of the whole record, one or more of the following:

- (1) Substantial changes are proposed in the project which will require major revisions of the previous EIR due to the involvement of new significant environmental effects or a substantial increase in the severity of previously identified effects;

(2) Substantial changes occur with respect to the circumstances under which the project is undertaken which will require major revisions of the previous EIR due to the involvement of new significant environmental effects or a substantial increase in the severity of previously identified significant effects; or

(3) New information of substantial importance, which was not known and could not have been known with the exercise of reasonable diligence at the time the previous EIR was certified as complete, shows any of the following:

(A) The project will have one or more significant effects not discussed in the previous EIR;

(B) Significant effects previously examined will be substantially more severe than shown in the previous EIR;

(C) Mitigation measures or alternatives previously found not to be feasible would in fact be feasible, and would substantially reduce one or more significant effects of the project, but the project proponents decline to adopt the mitigation measures or alternatives; or

(D) Mitigation measures or alternatives which are considerably different from those analyzed in the previous EIR would substantially reduce one or more significant effects on the environment, but the project proponents decline to adopt the mitigation measure or alternative.

An addendum is appropriate where a previously certified EIR has been prepared and some changes or revisions to the project are proposed, or the circumstances surrounding the project have changed, but none of the changes or revisions would result in significant new or substantially more severe environmental impacts, consistent with CEQA Section 21166 and State CEQA Guidelines Sections 15162, 15163, 15164, 15168, and 15183.

Specifically, the tiering provisions of CEQA Guidelines Section 15183 require that when a project is consistent with the development density established by general plan policies for which an EIR was certified, lead agencies shall not require additional environmental review, except as might be necessary to examine whether there are project-specific significant effects which are peculiar to the project. Consistent with these requirements, the City has engaged in a multi-step evaluation to determine whether additional evaluation would be required.

SUMMARY OF FINDINGS

This addendum includes an attachment with an environmental checklist that contains the substantial evidence supporting that the proposed annexation would not result in any new or substantially more severe environmental impacts from those identified in the GP PEIR. To ensure that all environmental topical areas are appropriately evaluated, the environmental checklist was prepared to mirror the standard organization of the sample environmental checklist presented in Appendix G of the State CEQA Guidelines. For each checklist topic, the analysis evaluates whether any "changed condition" (i.e., changed circumstances, project changes, issues that are peculiar to the project, or new information of substantial importance) that may result in a different or new environmental impact significance conclusion from the EIR would occur. The column titles of the checklist have been modified from the Appendix G presentation to help answer the questions to be addressed pursuant to CEQA Section 21166 and State CEQA Guidelines Section 15162, 15163, 15164, 15168, and 15183. This addendum and checklist serve as the appropriate CEQA compliance document and has been prepared consistent with the requirements of Section 15162 of the State CEQA Guidelines.

The analysis demonstrates that implementation of the proposed UC Merced annexation would not result in new significant effects or a substantial increase in the severity of previously identified significant effects. Further, no new information of substantial importance has been identified that suggests the potential for the UC Merced annexation to result in significant or substantially more severe effects not discussed in the GP PEIR. As demonstrated in the attached evaluation, UC Merced has committed to project design features and mitigation measures that would achieve impact reductions commensurate with the policies and mitigation measures identified in the GP PEIR. The City has not identified any mitigation measures or alternatives that would substantially reduce one or more significant effects on the environment and were either previously found to be infeasible and are now feasible or are considerably different from those analyzed in the previous EIR.

1 INTRODUCTION

The City of Merced (City) has been planning for the annexation of the University of California, Merced (UC Merced) since long before construction of the university began. Based on this long-term vision, the City and UC Merced have established agreements for the provision of public utilities including water, sewer, and transportation infrastructure to the UC Merced campus. An annexation agreement, first established in 2003, has been maintained to facilitate the eventual annexation of the area when the City Council deems it appropriate. Although the campus is within the City's Specific Urban Development Plan/Sphere of Influence (SUDP/SOI), annexation of UC Merced had not been permissible pursuant to the Cortese-Knox-Hertzberg Local Government Reorganization Act of 2000 because the UC Merced campus is not contiguous with the incorporated city. In September 2020, legislation was passed unanimously by both the State Assembly and the Senate that recognizes the unique circumstances surrounding the UC Merced annexation. Assembly Bill (AB) 3312 allows the City to annex the UC Merced campus along with a road strip (Bellevue Road or Lake Road) without the adjoining properties between UC Merced and the city limits. In February 2021, the Merced City Council directed City staff to proceed with the annexation of the UC Merced campus to the City under the terms of AB 3312.

1.1 PURPOSE OF THIS ADDENDUM

Annexation of UC Merced into the city was evaluated in the Program Environmental Impact Report for the Merced Vision 2030 General Plan (GP PEIR). However, development and design of the UC Merced campus has evolved from the assumptions used in the GP PEIR analyses. UC Merced has prepared an updated Long Range Development Plan for growth projected between 2020 and 2030 (the 2020 LRDP) and certified the UC Merced 2020 Long-Range Development Plan Subsequent Environmental Impact Report (2020 LRDP SEIR), which evaluates the potential environmental effects that could result from the implementation of the 2020 LRDP. This addendum provides evidence to demonstrate that no new or substantially more severe impacts would occur as a result of these deviations in project specifics, new information, or changed circumstances.

State CEQA Guidelines Section 15162 indicates that subsequent EIRs are appropriate only if major additions or changes to the analysis are necessary and none of the conditions requiring preparation of a subsequent EIR have occurred. Conditions that require preparation of subsequent analysis include substantial changes to the project that would result in a new significant impact or a substantial increase in the severity of an impact; substantial changes in the circumstances under which the project would occur that would result in a new significant impact or a substantial increase in the severity of an impact; new information of substantial importance indicating that the change in the project would result in significant effects not discussed, substantially more severe impacts, or a change in the feasibility of mitigation; or an alternative that was previously found to be infeasible. When none of these conditions are met, Section 15164 of the State CEQA Guidelines provides that a lead agency should prepare an addendum to the certified EIR. CEQA allows lead agencies to restrict review of modifications to a previously approved project to the incremental effects associated with the proposed modifications, compared against the anticipated effects of the previously approved project at build-out. This addendum evaluates the annexation of UC Merced, as currently planned, for potential to change the conclusions of the GP PEIR.

1.2 APPROACH TO ANALYSIS

This addendum uses a modified checklist format to document that the site-specific activities are covered by the GP PEIR pursuant to Section 15168(c) of the State CEQA Guidelines, which states, "subsequent activities in the program must be examined in the light of the program EIR to determine whether an additional environmental document must be prepared." Pursuant to Section 15168(c)(4), an agency should use "...a written checklist or similar device to document the evaluation of the site and the activity to determine whether the environmental effects of the operation were covered in the program EIR." The checklist is set up to document that none of the conditions described in CEQA

Guidelines Section 15162 calling for the preparation of a subsequent EIR have occurred and an addendum to the GP PEIR may be prepared (per CEQA Guidelines Section 15164).

In general, the checklist includes a summary of the impacts and mitigation measures from the GP PEIR, augmented by the analysis in the 2020 LRDP SEIR (as applicable), and followed by a determination of whether the annexation falls within the scope of the impacts disclosed in the GP PEIR. The analysis demonstrates that incorporating the UC Merced campus into the city would not result in new or more substantial significant impacts than disclosed in the GP PEIR.

1.2.1 Jurisdictional Relationship

UC Merced is one of 10 campuses within the University of California (UC) system, which is a constitutionally created State educational institution with “full powers of organization and government” (California Constitution Article IX, Section 9). As such, the UC system, including UC Merced, is not subject to regulations of local governments, such as city and county general plans and land use and zoning policies, when using property under the UC’s control in furtherance of the UC’s educational purposes. Although the UC Merced campus would be incorporated into the legal boundary of the city upon annexation, the City would not have jurisdiction over development and operation of the campus. For coordination purposes, UC Merced may consider aspects of local plans and policies for the communities surrounding the UC Merced property when it is appropriate and feasible, although there is no formal mechanism for doing so. Annexation is proposed to allow the City to continue to provide certain urban services to the campus. Annexation would not change the jurisdictional relationship between UC Merced and the City.

The City does not have authority to require that UC Merced comply with the mitigation measures identified in the GP PEIR. As detailed in Section 3, “Environmental Checklist,” the UC Merced 2020 LRDP and 2020 LRDP SEIR include a variety of policies and mitigation measures that UC Merced has adopted to address potential effects on the environment. The following analysis assumes that these existing commitments will be fulfilled and concludes that the required mitigation measures and design features included in the UC Merced LRDP are equally or more effective than the mitigation measures in the City’s GP PEIR.

1.2.2 Annexation Pre-Applications

The University Vista and Virginia Smith Trust (VST) Specific Plan projects are proposed mixed use developments that would be located west and south of the UC Merced campus, respectively, within the SUDP/SOI established in the Merced Vision 2030 General Plan. The city has received annexation pre-applications for these areas, which would be eligible for annexation following annexation of UC Merced.

The University Vista annexation project would involve the annexation of approximately 290 acres at the northwest corner of Bellevue and Lake Roads. The future mixed-use development would include an estimated 4,176 dwelling units (including 1,694 mixed use units, 845 units of student housing, 933 apartments, 494 townhomes, and 210 single-family homes) along with 788,486 square feet (sq. ft.) of commercial, mixed-use, and hospitality development. The proposed land uses are generally consistent with the Merced Vision 2030 land use designations and the Bellevue Community Plan.

The proposed VST Specific Plan is a conceptual land use plan for approximately 654 acres located northeast of the Merced city limit and within the area designated as “Community Plan” in the Merced Vision 2030 General Plan. The GP PEIR considered the effects of annexing this area into the city based on the conceptual land use plan. The current proposal for development of the VST property reflects current conditions and demand, as well as the changes that UC Merced adopted in the 2020 LRDP. As a result, it varies from the development envisioned in the University Community Plan (UCP) adopted by the County and used to inform the GP PEIR. The VST Specific Plan proposes a generally denser development with more dwelling units and more area designated for commercial and office development. For the VST Specific Plan portion of the UCP area, the number of dwelling units would increase by 1,440 units and the amount of commercial and office square footage would increase by approximately 709,000 sq. ft.

The Merced Vision 2030 General Plan assumed this type of urban village land use concept in these portions of the SUDP/SOI and the proposals are generally consistent with the programmatic assumptions in the Merced Vision 2030 General Plan, as evaluated in the GP PEIR. These proposals provide additional detail about the development that may occur in the SOI/SUDP. Because these pre-applications are consistent with the assumptions for long-term buildout of the Merced Vision 2030 General Plan, they do not constitute substantial changes in circumstances that would result in a new or a substantially more severe significant impact. The cumulative analysis in the GP PEIR evaluated annexation of these areas, and the proposed annexation would not result in indirect environmental effects not previously evaluated. Also, it should be noted that these proposals have not yet been approved; both involve discretionary actions, which will require environmental review pursuant to CEQA.

1.3 DOCUMENT ORGANIZATION

This addendum is organized as follows:

Section 1: Introduction. This section introduces the environmental review process. It describes the purpose and organization of the analysis.

Section 2: Project Description. This section provides a brief description of the proposed annexation.

Section 3: Environmental Checklist for Environmental Review. This section presents an analysis of a range of environmental issues to determine whether the UC Merced annexation would result in significant environmental impacts due to the proposed annexation or changes in circumstances or new information.

Section 4: References. This section lists the references used in preparation of this addendum.

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2 PROJECT DESCRIPTION

The proposed annexation (hereafter the “project”) would result in an administrative boundary change. The project would not result in any changes to development within the annexation area, as development of the University of California, Merced (UC Merced) campus is governed by the UC Regents and subject to an approved Long Range Development Plan (LRDP), as discussed further below.

2.1 LOCATION

The UC Merced campus is located approximately 2 miles northeast of the limits of the City of Merced (Figure 1). The entire 1,026-acre campus located on Lake Road would be annexed. In addition, the 2-mile segment of Bellevue Road between G Street and Lake Road would be annexed pursuant to the requirements of Assembly Bill 3312, enacted in 2020, which authorized annexation of the existing campus and road (Figure 2).

2.2 EXISTING SITE CONDITIONS

The UC Merced campus has been developed through two phases: the first phase developed approximately 100 acres in the northern portion of the campus site and the recently completed second phase (also referred to as the UC Merced 2020 Project) expanded the campus facilities to the south and southeast, by 136 acres. Campus facilities include classrooms, offices, a library, social sciences and management and science and engineering buildings, student housing, dining facilities, a recreation and wellness center, sports fields, logistical/support services, and an early childhood education center; as well as additional teaching, residential, research, and student-support facilities.

Surrounding land uses include Lake Yosemite and Lake Yosemite Regional Park to the north, the Merced Vernal Pools Grassland Preserve to the east, almond orchards to the south, and residential development to the west (Figure 3). Lake Yosemite is a regulating reservoir owned and operated by Merced Irrigation District (MID). The land between the Lake Yosemite Regional Park and the northern boundary of the campus is owned by Merced County. The university purchased a conservation easement that was placed on a portion of this property in 2016.

2.2.1 Existing Utility Service

The campus is currently served by the full range of utilities and a well-developed utility infrastructure, augmented by water, wastewater, natural gas, electricity, and some telecommunications services from outside providers. Potable water is provided to the campus by the City of Merced via its distribution system. The water is primarily supplied by a 16-inch water line within the alignment of Bellevue Road. An on-campus distribution system has been developed to deliver potable water to each building. There is also a water supply well and a 250,000-gallon water storage tank on the campus to accommodate fire flow requirements. The campus connects to the City of Merced wastewater collection and treatment system via a 27-inch sanitary sewer line in Bellevue Road. The sewer pipeline in Bellevue Road was constructed to serve a campus with 25,000 students and connects to a 27-inch trunk line on G Street near Merced College.

MID has jurisdiction and control over the Fairfield and Le Grand Canals, which traverse the campus site. In 2005, MID and UC Merced executed an agreement that allows the campus to discharge stormwater into Fairfield Canal, provided stormwater is appropriately detained before discharge into the canal and that the discharge into the canal does not exceed 225 gallons per minute. Discharge of stormwater to Le Grand Canal is not permitted because of the possibility that the canal may provide domestic water to the town of Le Grand. The campus’ stormwater collection and conveyance system is designed to convey runoff from a 10-year, 24-hour storm and consists of a network of grassy swales, detention basins, storm drain inlets, and underground pipes.

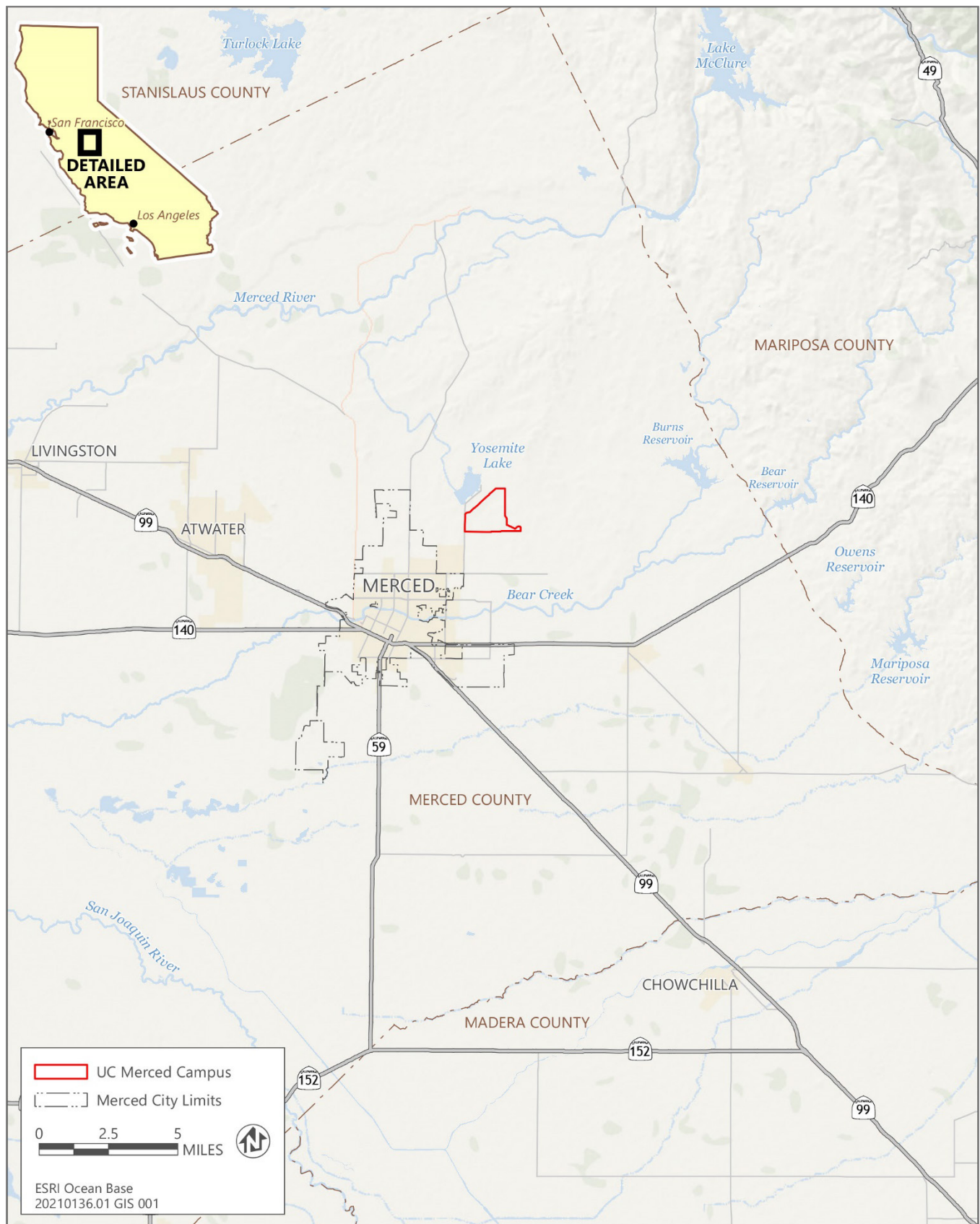


Figure 2-1 Regional Location

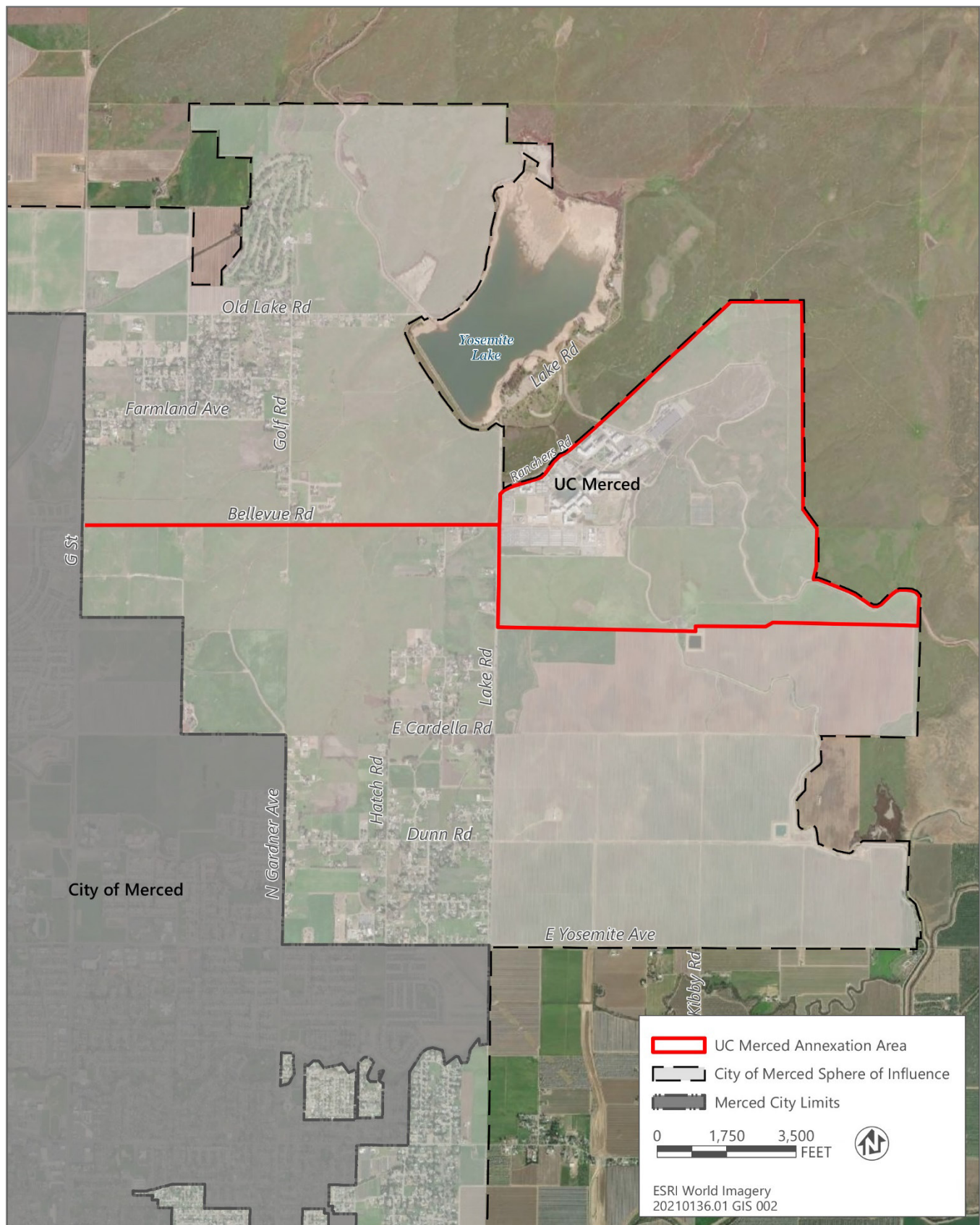


Figure 2-2 Annexation Area

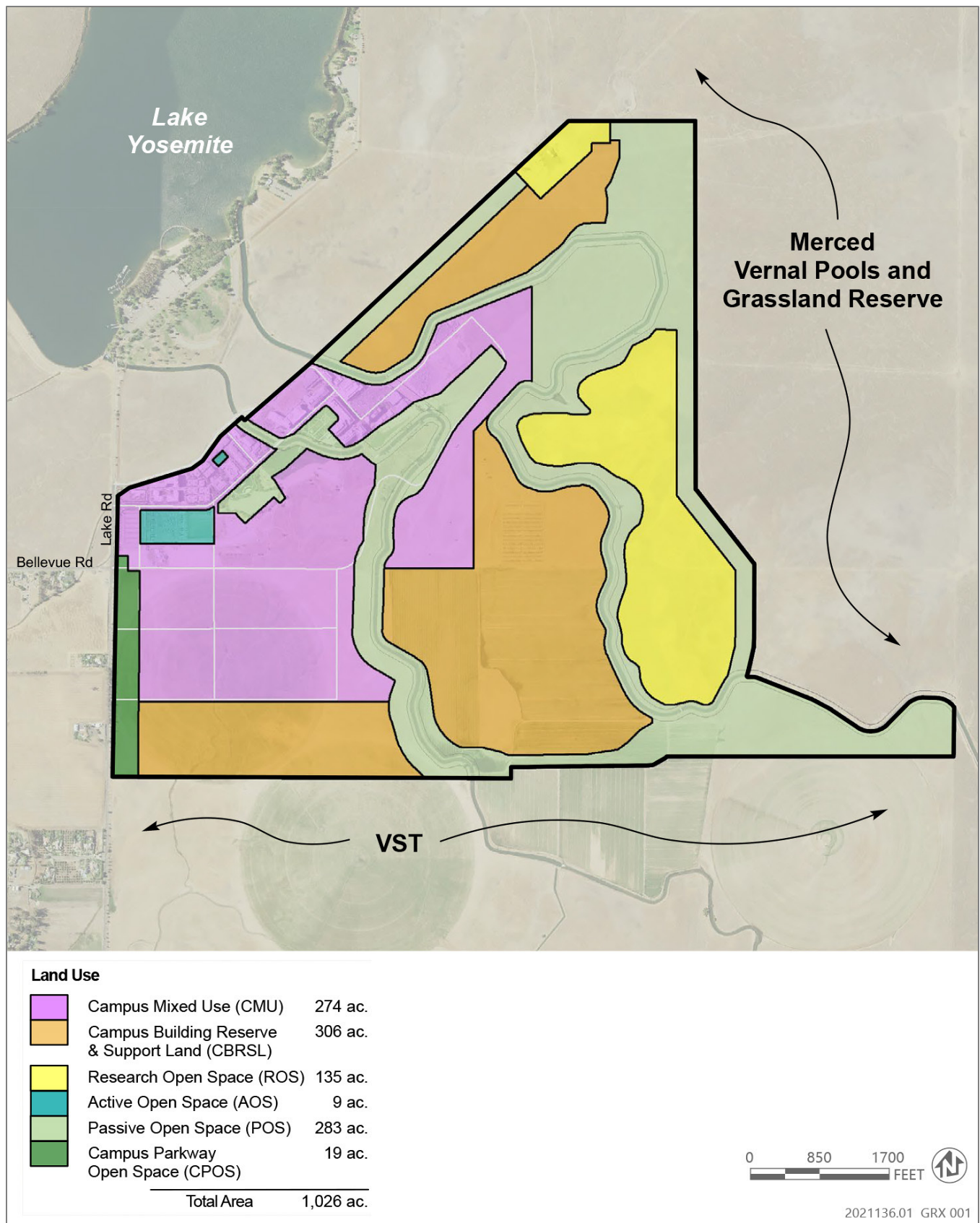


Figure 2-3 UC Merced 2020 Long Range Development Plan Land Use Diagram

2.2.2 Existing Public Services

UC Merced has its own police force, which has been serving the campus since it opened in 2005. The campus site is also currently within the jurisdiction of the Merced County Sheriff's Department. The university, County, and City police forces have established cooperative working relationships and the campus police frequently assists in local law enforcement activities, particularly related to traffic in the vicinity of the campus.

The campus currently receives fire protection services jointly from the Merced County Fire Department and the California Department of Forestry and Fire Protection (CAL FIRE). The Merced County Fire Department provides the fire stations, equipment, and tools while CAL FIRE provides administrative staff, firefighting personnel, and training. The City of Merced Fire Department provides mutual aid support, upon request, to the Merced County Fire Department and CAL FIRE under a signed Mutual Aid Agreement. There is no automatic response contractual agreement in place between the fire departments.

2.3 EXISTING ENVIRONMENTAL REVIEW

2.3.1 Merced Vision 2030 General Plan Program EIR

The Merced Vision 2030 General Plan, adopted in January 2012, reflects that the annexation of UC Merced is within the long-term plans of the City. The General Plan includes Policy Urban Expansion (UE)-1.4 related to continuation of joint planning efforts and Policy UE-1.5 to promote annexation of developed areas in the City's Specific Urban Development Plan/Sphere of Influence during the planning period. The Urban Expansion Chapter of the Merced Vision 2030 General Plan provides guidance on the integration of the university into the City and identifies the desire to annex the area at the earliest feasible date. Implementing Action UE-1.4.a calls for annexation of the UC Merced campus and UE 1.4.b spells out a comprehensive policy statement adopted by City Council Resolution #2006-89 in 2006 calling for the planned adjacent University Community (generally to the south of the campus) to also be annexed to the City. The Merced Vision 2030 General Plan states that "the City should revise all of its various planning documents to accommodate the incorporation of the University Community into the City of Merced, including...plans for wastewater treatment, water, storm drainage, parks, fire protection, and other services" (City of Merced 2012:2-30).

The Program Environmental Impact Report for the Merced Vision 2030 General Plan (GP PEIR) evaluates the potential for physical environmental effects to result from implementation of the Merced Vision 2030 General Plan. Consistent with Public Resources Code (PRC) Section 21083.3(b) and State CEQA Guidelines Sections 15168 and 15183, the GP PEIR can be used as the CEQA document for subsequent projects (public and private) that are consistent with the Merced Vision 2030 General Plan. Projects are evaluated to determine whether the actions proposed fall within the scope of the Merced Vision 2030 General Plan, whether project impacts are addressed in the certified GP PEIR, and whether the project incorporates all applicable performance standards and mitigation measures identified therein.

2.3.2 UC Merced Long-Range Development Plan EIRs

LRDPs are comprehensive land use plans used by University of California campuses to guide future physical growth. An LRDP identifies the policies and physical development needed to achieve the University's academic goals for an established time horizon and a projected enrollment level. Campus administration and the University of California use the LRDP to guide future land use decisions. In March 2009, the Board of Regents of the University of California certified an EIR that analyzed and disclosed the impacts from the implementation of a LRDP for UC Merced and adopted the UC Merced 2009 LRDP. The 2009 LRDP was designed to guide the physical development of the 815-acre campus through 2030 and beyond for growth up to an enrollment level of 25,000 students and a total campus population of 31,560 people.

The City of Merced chose to reflect the 2009 external boundaries for the university (and the adjacent University Community North) within the Merced Vision 2030 General Plan based on the environmental impacts analyzed in the

EIR prepared for the 2009 LRDP, which involved the participation of the university, the County of Merced, and the City of Merced. The GP PEIR also considered the effects of annexing UC Merced into the city based on the 2009 LRDP.

UC Merced subsequently acquired more land to the south of the original campus and revised the populations projections through 2030. UC Merced prepared the 2020 LRDP to guide future development of the 1,026-acre campus to support projected enrollment of 15,000 students and a total campus population of 17,411 people. The land use diagram in the 2009 LRDP was amended to cover the larger campus site, provide for more compact and sustainable development within the revised campus site, and allow more flexibility in the siting of future facilities. In view of these changes, An Initial Study was prepared to identify environmental impacts that were adequately addressed in the 2009 EIR and provide the basis for the scope of the UC Merced 2020 Long-Range Development Plan Subsequent Environmental Impact Report (2020 LRDP SEIR), which evaluates the potential environmental effects that could result from the implementation of the 2020 LRDP. The 2020 LRDP SEIR builds on the analysis and mitigation in the 2009 LRDP EIR; the mitigation adopted for the 2009 LRDP would apply to the new facilities proposed in the 2020 LRDP.

EXISTING PLANNING AGREEMENTS

In 2003, the City entered into an Urban Services Agreement with the University of California to provide wastewater and water services to the UC Merced campus. As part of that agreement, UC Merced also signed an Annexation Agreement agreeing to annex Phase 1 of the Campus to the City of Merced at the time that the City Council deemed it was appropriate. The Urban Services Agreement was subsequently amended twice (in 2016 and 2019) to reflect the expansion of the campus with the 2020 LRDP. A new Annexation Agreement for 219 acres was signed in 2016 to reflect the expansion of the campus.

Also in 2016, UC Merced and the City entered into a Transportation Funding Agreement for the 2020 LRDP. This Transportation Agreement includes provisions relating to truck routes and roadway construction impacts during construction of the 2020 LRDP; UC Merced's funding and construction obligations for Campus Parkway and improvements to Bellevue Road and Lake Road (including the intersections of Bellevue Road at Lake Road and Lake Road at Yosemite Avenue); reimbursement provisions for University Community properties; and Transit Service improvements and bus stop locations for UC Merced's bus service within the city.

2.4 CONSISTENCY WITH MERCED VISION 2030 GENERAL PLAN PROGRAM EIR

The Merced Vision 2030 General Plan is a long-range plan intended to guide growth and development of the city through the year 2030. During this period, the population of the City of Merced Specific Urban Development Plan/Sphere of Influence (SUDP/SOI) area is expected to more than double from the 2010 level of 80,985 to over 155,000 individuals. These totals are based on UC Merced enrollment of approximately 2,700 full time students in 2008 and up to 25,000 in 2030. (City of Merced 2010:2-1). The 2020 LRDP (which is designed to address campus growth between 2020 and 2030), however, is based on UC Merced's revised enrollment projection of 15,000 students and a total campus population of 17,411 persons in 2030. This is a reduction of 10,000 students in 2030 compared to the assumptions in the GP PEIR.

2.4.1 Merced Vision 2030 General Plan Land Use Designations

The Land Use Diagram for the Merced Vision 2030 General Plan identifies UC Merced as "school." Existing and planned development in the area proposed for annexation is, therefore, consistent with both the land use envisioned in the Merced Vision 2030 General Plan and the land use assumptions of the General Plan PEIR.

2.4.2 Merced Vision 2030 General Plan Project Objectives

The Merced Vision 2030 General Plan aims to achieve the following guiding principles identified in the General Plan PEIR (pp. 2-1 to 2-2).

- ▶ Expansion of the Sphere of Influence and City boundary with phasing of development to avoid premature conversion of agricultural land and to plan for cost-effective extension of municipal services.
- ▶ Foster compact and efficient development patterns.
- ▶ Connectivity between existing and planned urban areas. Examples include the northeast area toward UCM, the University Community, and South Merced.
- ▶ Merced as the single municipal service provider in the expanded sphere of influence.
- ▶ New development provides or pays its fair share of public services and facilities to avoid burdening existing city residents (in short, new growth pays for itself).
- ▶ Mixed-use, transit and pedestrian friendly urban villages in growth areas with direct access to commercial cores from surrounding neighborhoods.
- ▶ Commercial nodes in new growth areas to avoid the aesthetic and circulation issues associated with more common “strip commercial.”
- ▶ Circulation: Recognition of the cost and importance of the arterial street system and protect capacity with access standards. Designs that encourage all modes of transportation.
- ▶ Build community quality. High community standards for Merced’s services, infrastructure, and private development as a strategy for attracting business and industry and to benefit the City’s residents.
- ▶ Planning well in advance for industrial/business park uses and for the infrastructure needed to support such development.
- ▶ A diversity of housing types and opportunities.
- ▶ Encouraging Sustainable and “Green” Development.
- ▶ Planning for the provision of infrastructure ahead of development.
- ▶ Maintaining Merced’s high quality of life and keeping it a nice place to live.
- ▶ Encouraging new research parks and the use of new technologies.
- ▶ Protection of the Merced Regional Airport as an important community asset.
- ▶ Maintaining a quality educational environment for pre-school, K-12, and higher education.
- ▶ Maintaining our quality parks and recreation systems, including the bike path system.
- ▶ Encouraging a healthy community through improved medical facilities, air quality, parks & recreation opportunities, etc.

Annexation of UC Merced would not conflict with these objectives.

2.5 DEVELOPMENT ASSUMPTIONS

This analysis is based on the most current development assumptions prepared by UC Merced, as identified in the 2020 LRDP. Between 2020 and 2030, enrollment is projected to increase by about 5,300 students, based on actual enrollment of 9,700 students in 2020, and 1,131 faculty and staff (UC Merced 2019:2.0-4). These are reduced enrollment levels and associated smaller increases in faculty and staff compared to the previous projections used in the design of the 2009 LRDP that informed the General Plan PEIR. The year 2030 is the horizon year for the City’s

adopted General Plan, as evaluated in the GP PEIR; it is also the horizon year of UC Merced's current LRDP. Therefore, although it is acknowledged that the campus may continue to grow after 2030, these projections are appropriate for evaluation of the proposed annexation.

In total, the 2020 LRDP designates 274 acres for Campus Mixed Use, 306 acres for Campus Building Reserve and Support Land, 135 acres for Research Open Space, 9 acres for Active Open Space, 283 acres for Passive Open Space, and 19 acres for Campus Parkway Open Space (Figure 3). The 2020 LRDP projects additional academic (639,100 gross square feet [gsf]), housing (379,500 gsf), athletic (357,500 gsf), and support space (453,800 gsf) to the campus through 2030.

2.6 REQUIRED PERMITS AND APPROVALS

The City is proposing annexation of UC Merced based on the terms of the existing annexation agreement (which currently applies to 219 acres of the campus) and Assembly Bill 3312. As the lead agency, the City is responsible for considering the adequacy of the environmental review before determining if the overall project should be adopted.

The Local Agency Formation Commission of Merced County is a legislatively established commission responsible for coordinating logical and timely changes in local governmental boundaries; conducting special studies that review ways to reorganize, simplify, and streamline governmental structure; and preparing a sphere of influence for each city and special district in each county. The Local Agency Formation Commission will consider and ultimately approve or deny the request for annexation.

3 ENVIRONMENTAL CHECKLIST FOR ENVIRONMENTAL REVIEW

3.1 EXPLANATION OF CHECKLIST EVALUATION CATEGORIES

The purpose of this checklist is to evaluate the proposed annexation of UC Merced and determine if it results in new significant impacts when compared to the impacts identified in the certified Merced Vision 2030 General Plan Program Environmental Impact Report (GP PEIR). The row titles of the checklist include the full range of environmental topics, as presented in Appendix G of the State CEQA Guidelines. However, the column titles of the checklist have been modified from the Appendix G presentation to help answer the questions to be addressed pursuant to CEQA Section 21166 and State CEQA Guidelines Section 15162, 15163, 15164, and 15168. A “no” answer does not necessarily mean that there are no potential impacts relative to the environmental category; rather, it means there is no change in the condition or status of the impact compared to the conclusions of the GP PEIR. The purpose of each column of the checklist is described below.

3.1.1 Impact Examined in General Plan PEIR

This column provides a cross-reference to the pages of the prior environmental documents where information and analysis may be found relative to the impact criteria listed under each topic.

3.1.2 Could Annexation Result in a New or Substantially More Severe Impact?

Pursuant to Section 15162(a)(1) of the State CEQA Guidelines, this column indicates whether the changes represented by the current project will result in new significant impacts that have not already been considered by the prior environmental review or a substantial increase in the severity of a previously identified impact.

3.1.3 Are there Changes in Circumstance or New Information Available that Could Result in a Substantially More Severe Impact?

Pursuant to Section 15162(a)(2) of the CEQA Guidelines, this column indicates whether there have been changes to the project site or the vicinity (circumstances under which the project is undertaken) that have occurred subsequent to the prior environmental documents, which would result in the current project having new significant environmental impacts that were not considered in the prior environmental documents or that substantially increase the severity of a previously identified impact.

3.1.4 Do Mitigation Measures in the 2020 LRDP SEIR Address/Resolve Impacts, Including Impacts That Would Otherwise be New or Substantially More Severe?

Pursuant to Section 15162(a)(3) of the CEQA Guidelines, this column would typically indicate whether the GP PEIR provides mitigation for implementation of the General Plan that would also apply to impacts associated with the proposed UC Merced Annexation. However, because the UC is a constitutionally created State educational institution with “full powers of organization and government” (California Constitution Article IX, Section 9), UC Merced would not be obligated to implement mitigation measures identified in the City’s GP PEIR upon annexation. For this reason,

this column indicates whether UC Merced has adopted either design features or mitigation measures through the 2009 LRDP EIR or 2020 LRDP SEIR that would address or resolve potential impacts that could otherwise be new or substantially more severe. If "N/A" is indicated, there is no significant impact requiring mitigation as analyzed in the 2020 LRDP SEIR.

3.2 EXPLANATION OF DISCUSSION, MITIGATION MEASURES, AND CONCLUSIONS SECTIONS

3.2.1 Environmental Setting

The environmental setting provides an overview of the existing conditions as they relate to each individual resources section. These settings are used to assess the degree to which implementation of the proposed modifications addressed in this addendum would result in an environmental impact.

3.2.2 Discussion

A discussion of the elements of the checklist is provided under each environmental category to clarify the answers. The discussion first provides a summary of the analysis of the topic provided in the GP PEIR, including General Plan policies and mitigation that were relied upon to determine whether a significant impact would occur. Next, a summary of the evaluation in the potential for effects related to the topic due to development of the 2020 LRDP is provided. The potential for annexation of the UC Merced campus into the city to result in new or more severe impacts is disclosed.

3.2.3 Mitigation Measures

Mitigation measures from the prior environmental review in the GP PEIR are summarized under each environmental category. However, because the UC is not subject to regulations of local governments when using property under UC Merced's control in furtherance of UC Merced's educational purposes, UC Merced would not be obligated to implement mitigation measures identified in the City's GP PEIR upon annexation. For this reason, the discussion in this section also references project features and mitigation measures adopted by UC Merced that would address the topics under evaluation. Refer to Appendix A for the full text of the mitigation measures in the 2020 LRDP SEIR.

3.2.4 Conclusion

A discussion of the specific conclusion for each topical section relating to the need for additional environmental documentation is contained at the end of each separate section.

3.3 AESTHETICS

ENVIRONMENTAL ISSUES	Impact Examined in GP PEIR?	Could Annexation Result in a New or Substantially More Severe Impact?*	Are there Changes in Circumstance or New Information Available that Could Result in a Substantially More Severe Impact?	Do Mitigation Measures and/or Design Features Address/Resolve Impacts, Including Impacts That Would Otherwise be New or Substantially More Severe?
Would the project:				
a) Have a substantial adverse effect on a scenic vista?	Impact #3.1-1: Substantial adverse effect on a scenic vista, pp. 3.1-4 to 3.1-6.	No	No	Yes
b) Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway?	Impact #3.1-2: Substantially damage scenic resources, including but not limited to trees, rock outcroppings, and historic buildings within a state scenic highway, p. 3.1-6.	No	No	N/A
c) In non-urbanized areas, substantially degrade the existing visual character or quality of public views of the site and its surroundings? (Public views are those that are experienced from publicly accessible vantage points.) If the project is in an urbanized area, would the project conflict with applicable zoning and other regulations governing scenic quality?	Impact #3.1-3: Substantially degrade the existing visual character or quality of the site and its surroundings, pp. 3.1-6 and 3.1-7.	No	No	Yes
d) Create a new source of substantial light or glare which would adversely affect day or nighttime views in the area?	Impact #3.1-4: Create a new source of substantial light or glare that would adversely affect day or night views in the area, pp. 3.1-7 and 3.1-8	No	No	Yes

*Determination does not factor implementation of previously adopted mitigation.

3.3.1 Environmental Setting

The GP PEIR describes existing scenic views and resources. Applicable Federal, State, and local regulations are also explained. No substantial change in the environmental setting related to aesthetics, described in the GP PEIR Section 3.1, "Aesthetics," has occurred since certification of the GP PEIR. The scenic character remains consistent with the views described in the GP PEIR, including those provided in Figure 3.1-2 (Photoplate 1). No changes in pertinent regulations or the status of scenic roadways have occurred.

3.3.2 Discussion

a) Have a substantial adverse effect on a scenic vista?

Pages 3.1-4 to 3.1-6 of the GP PEIR discuss the potential for General Plan implementation to result in substantial adverse effects on scenic vistas (Impact #3.1-1). As defined in the GP PEIR, scenic vistas are expansive views of highly valued landscapes from publicly accessible viewpoints. Scenic vistas may include views of natural features such as topography, water courses, rock outcrops, natural vegetation, and manmade scenic structures. Many areas within the City of Merced offer views of the Sierra Nevada and Coast Range. As stated in the GP PEIR, development in the planning area is not expected to block views of scenic resources. The visual character of the planning area is anticipated to change from open agricultural fields and pasture land to urban development. However, development would be consistent with General Plan policies aimed to protect scenic corridors (Policy OS 1.3 of the Open Space Element) and scenic viewsheds associated with agricultural resources (Policy OS 2.1 of the Open Space Element). Furthermore, development would comply with standards, including floor area ratio and building height requirements, contained in the Urban Design Element, the Urban Expansion Element, and the Land Use Element of the General Plan. The GP PEIR concludes that General Plan policies would ensure that impacts on scenic vistas would be less than significant, and no cumulative impacts were identified (City of Merced 2010).

Annexation of UC Merced would not have additional effects on scenic vistas. The GP PEIR evaluated the development and annexation of the UC Merced campus, as proposed in the 2009 LRDP. Therefore, impacts on scenic vistas from development of the UC Merced campus in accordance with the 2009 LRDP are consistent with the impacts from implementation of the GP PEIR, described above.

Subsequent to the release of the GP PEIR, the University prepared the 2020 LRDP to change the previously adopted 2009 LRDP. The 2020 LRDP is the current planning document for development of the UC Merced campus; it was developed to reflect slower enrollment growth than was originally anticipated at UC Merced. Although the 2020 LRDP encompasses a larger campus site than the 2009 LRDP, the land use diagram was modified to make the campus footprint more compact and sustainable, with a larger area dedicated to open space.

The 2020 LRDP SEIR did not evaluate impacts on scenic vistas because the Initial Study determined that the revised LRDP would not result in a more severe or new impact on scenic vistas beyond that identified for the 2009 LRDP (UC Merced 2018a). Specifically, the 211 acres of land that would be added to the campus would be primarily undeveloped and dedicated to open space and the relatively small 11-acre area dedicated to the development of campus facilities would be similar in appearance and scale to the development proposed in the 2009 LRDP. Furthermore, the mitigation adopted for the 2009 LRDP (MM AES-1) would apply to the new facilities proposed in the 2020 LRDP. This mitigation commits the university to plant tall trees along the campus' western boundary to screen views of the campus facilities from Lake Yosemite Regional Park and design major vehicular and pedestrian transportation corridors to provide views of the Sierra Nevada (UC Merced 2009).

Based on the above discussion, annexation of the UC Merced campus would not result in any new impacts on scenic vistas beyond those identified in the GP PEIR. Therefore, the findings of the GP PEIR regarding scenic vistas remain valid and no new mitigation is required. This impact would remain less than significant.

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

Page 3.1-6 of the GP PEIR discusses the potential for General Plan implementation to substantially damage scenic resources within a state scenic highway (Impact #3.1-2). As described in the GP PEIR, there are no designated state scenic highways within the planning area. Therefore, the GP PEIR concluded that there would be no impact on scenic resources within a state scenic highway, and no cumulative impacts were identified (City of Merced 2010).

No new state scenic highways have been designated in the planning area since the adoption of the GP PEIR (UC Merced 2018a). Therefore, annexation of the UC Merced campus would not result in any new impacts on scenic resources within a state scenic highway that were not identified in the GP PEIR. The findings of the GP PEIR regarding

scenic resources within a state scenic highway remain valid and no new mitigation is required. There would continue to be no impact.

c) In non-urbanized areas, substantially degrade the existing visual character or quality of public views of the site and its surroundings? (Public views are those that are experienced from publicly accessible vantage points.) If the project is in an urbanized area, would the project conflict with applicable zoning and other regulations governing scenic quality?

Pages 3.1-6 and 3.1-7 of the GP PEIR discuss the potential for General Plan implementation to substantially degrade visual character and quality (Impact #3.1-3). As stated in the GP PEIR, development in the planning area would alter the existing visual character by transforming views from the existing rural setting to urban residential, commercial, and industrial vistas. However, development would be consistent with policies in the Urban Design Element, Urban Expansion Element, and the Land Use Element of the General Plan. These policies would ensure that urban development is compact, low profile, and architecturally interesting. The GP PEIR concludes that impacts on visual quality would be less than significant, and no cumulative impacts were identified (City of Merced 2010).

Annexation of UC Merced would not result in additional degradation of visual character or quality of public views of the campus and surrounding areas. The GP PEIR evaluated the development and annexation of the UC Merced campus, as proposed in the 2009 LRDP. Therefore, impacts on visual character and quality from development of the UC Merced campus in accordance with the 2009 LRDP are consistent with the impacts from implementation of the GP PEIR, described above.

As described in Section 3.3.2(a) above, the 2020 LRDP is the current planning document for development of the UC Merced campus. The 2020 LRDP SEIR did not evaluate impacts on visual character and quality because the Initial Study determined that the revised LRDP would not result in a more severe or new impact on visual character and quality beyond that identified for the 2009 LRDP (UC Merced 2018a). Specifically, the 211 acres of land that would be added to the campus would be primarily undeveloped and dedicated to open space and the relatively small 11-acre area dedicated to the development of campus facilities would be similar in visual character and quality to the development proposed in the 2009 LRDP. Furthermore, the mitigation adopted for the 2009 LRDP (MM AES-3) would apply to the new facilities proposed in the 2020 LRDP. Through this mitigation, UC Merced committed to specific design standards for aboveground infrastructure that require screening, camouflage, and co-location of facilities (UC Merced 2009).

Based on the above discussion, annexation of the UC Merced campus would not result in any new impacts on visual character and quality that were not identified in the GP PEIR. Therefore, the findings of the GP PEIR regarding visual character and quality remain valid and no new mitigation is required. This impact would remain less than significant.

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

Pages 3.1-7 and 3.1-8 of the GP PEIR discuss the potential for General Plan implementation to adversely affect views from new sources of light and glare (Impact #3.1-3). As stated in the GP PEIR, individual development projects in the planning area could result in an incremental contribution to a cumulative light and glare impact. Although General Plan Policy OS-1.4 would improve and expand the City's urban forest and reduce glare effects, the GP PEIR concluded that impacts would be potentially significant. Mitigation Measure #3.1-4 would require development projects to comply with design guidelines for outdoor lighting. The GP PEIR concludes that impacts related to light and glare would be less than significant with mitigation. However, the increase in nighttime illumination and daytime glare is significant, cumulatively considerable, and unavoidable (Impact #3.1-5) (City of Merced 2010).

Annexation of UC Merced would not create additional sources of light and glare. The GP PEIR evaluated the development and annexation of the UC Merced campus, as proposed in the 2009 LRDP. Therefore, impacts related to light and glare from development of the UC Merced campus in accordance with the 2009 LRDP are consistent with the impacts from implementation of the GP PEIR, described above.

As described in Section 3.3.2(a), above, the 2020 LRDP is the current planning document for development of the UC Merced campus. The 2020 LRDP SEIR did not evaluate impacts related to light and glare because the Initial Study determined that the revised LRDP would not result in a more severe or new impact on light and glare beyond that identified for the 2009 LRDP (UC Merced 2018a). Specifically, the 211 acres of land that would be added to the campus would be primarily undeveloped and dedicated to open space and the relatively small 11-acre area dedicated to the development of campus facilities would have similar light and glare effects as the development proposed in the 2009 LRDP. Because the development intensity of the 2020 LRDP is reduced, there would not be a new significant impact. Furthermore, the mitigation proposed for the 2009 LRDP (MM AES-3) would apply to the new facilities proposed in the 2020 LRDP (UC Merced 2009).

Based on the above discussion, annexation of the UC Merced campus would not result in any new impacts or substantially increase the severity of light and glare impacts than is identified in the GP PEIR. Therefore, the findings of the GP PEIR regarding light and glare remain valid and no new mitigation is required. This impact would remain significant and unavoidable.

3.3.3 Mitigation Measures

The following mitigation measure was adopted upon approval of the General Plan to mitigate impacts associated with light and glare.

Mitigation Measure #3.1-4: The following guidelines will be followed in selecting and designing any outdoor lighting:

1. All outdoor lights including parking lot lights, landscaping, security, path and deck lights should be fully shielded, full cutoff luminaries.
2. Complete avoidance of all outdoor up-lighting for any purpose.
3. Avoidance of tree mounted lights unless they are fully shielded and pointing down towards the ground or shining into dense foliage. Ensure compliance over time.
4. Complete avoidance of up-lighting and unshielded lighting in water features such as fountains or ponds.

As described above, UC Merced has committed to project-specific measures to address light and glare. The UC Merced Design Standards (Section K – Electrical Requirements) include specifications to ensure that outdoor lighting does not result in backlight, uplight, or glare. Light levels are determined based on Illuminating Engineering Society (IES) recommendations and the State of California's Energy Code (Title 24). The design requirements specify that exterior lighting shall not contribute to light pollution by throwing light beyond the campus property lines or up into the night sky, contributing to sky glow and obscuring night-time vistas. In addition, exterior lighting designs strive to meet the U.S. Green Building Council's (LEED) criteria for its "Dark Sky" credit SS 8.0.

Furthermore, the mitigation adopted for the 2009 LRDP (MM AES-1) would apply to the new facilities proposed on the UC Merced campus. This mitigation commits the university to plant tall trees along the campus' western boundary to screen views of the campus facilities from Lake Yosemite Regional Park and design major vehicular and pedestrian transportation corridors to provide views of the Sierra Nevada. Through 2009 LRDP mitigation measure MM AES-3, the University has committed to specific design standards for aboveground infrastructure that require screening, camouflage, and co-location of facilities. See Appendix B for the full text of the mitigation measures adopted for the 2009 LRDP. No new mitigation measures are required.

3.3.4 Conclusion

There are no significant impacts that are peculiar to the project. No new impacts have occurred nor has any new information been found requiring new analysis or verification. The project would not have any potentially significant impacts or cumulative impacts that were not discussed in the GP PEIR. Therefore, the conclusions of the GP PEIR remain valid and approval of the project would not require additional environmental review.

3.4 AGRICULTURE AND FOREST RESOURCES

ENVIRONMENTAL ISSUES	Impact Examined in GP PEIR?	Could Annexation Result in a New or Substantially More Severe Impact?*	Are there Changes in Circumstance or New Information Available that Could Result in a Substantially More Severe Impact?	Do Mitigation Measures and/or Design Features Address/Resolve Impacts, Including Impacts That Would Otherwise be New or Substantially More Severe?
Would the project:				
a) Convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Important Farmland), as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to non-agricultural use?	Impact #3.2-1: Directly or indirectly result in conversion of Prime Farmland, Unique Farmland or Farmland of Statewide Importance (Farmland) to non-agricultural use, pp. 3.2-4 to 3.2-6	No	No	N/A
b) Conflict with existing zoning for agricultural use or a Williamson Act contract?	Impact #3.2-2: Conflict with existing zoning for agricultural use, or a Williamson Act contract, p. 3.2-6	No	No	N/A
c) Conflict with existing zoning for, or cause rezoning of, forest land (as defined in Public Resources Code section 12220(g)), timberland (as defined by Public Resources Code section 4526), or timberland zoned Timberland Production (as defined by Government Code section 51104(g))?	Impact #3.2-3: Conflict with existing zoning for, or cause rezoning of, forest land (as defined by Public Resources Code section 1220(g)), timberland (as defined by Public Resources Code section 4526), or timberland zoned Timberland Production (as defined by Government Code section 51104(g)), p. 3.2-7	No	No	N/A
d) Result in the loss of forest land or conversion of forest land to non-forest use?	Impact #3.2-4: Result in the loss of forest land or conversion of forest land to non-forest use, p. 3.2-7	No	No	N/A
e) Involve other changes in the existing environment, which, due to their location or nature, could result in conversion of Farmland to non-agricultural use or conversion of forest land to non-forest use?	Impact #3.2-5: Involve other changes in the existing environment which, due to their location or nature, could result in conversion of Farmland, to non-agricultural use or conversion of forest land to non-forest use, p. 3.2-7	No	No	N/A

*Determination does not factor implementation of previously adopted mitigation.

3.4.1 Environmental Setting

The GP PEIR describes important farmlands and Williamson Act Lands in the planning area. No changes to these designations have occurred within the SUDP/SOI or immediate vicinity of the UC Merced campus. Applicable Federal, State, and local regulations are consistent with the explanations provided in the GP PEIR. No substantial change in the environmental setting related to agriculture and forest resources, described in the GP PEIR Section 3.2, "Agriculture and Forest Resources," has occurred since certification of the GP PEIR.

3.4.2 Discussion

a) Convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Important Farmland), as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to non-agricultural use?

Pages 3.2-4 to 3.2-6 of the GP PEIR discuss the potential for General Plan implementation to convert Important Farmland to non-agricultural use (Impact #3.1-3). As stated in the GP PEIR, development in the planning area would result in the conversion of 1,898 acres of Important Farmland to urban uses. Although the General Plan includes Policies OS-2.1 and OS-2.2 and implementation actions to protect agricultural resources, the GP PEIR concluded that impacts on Important Farmland would be potentially significant. Mitigation Measure #3.2-1 would enhance the protection of agricultural land by requiring the City to collaborate with property owners; work cooperatively with land trusts and other organizations; establish conservation easements; and prioritize infill, sequential, and contiguous development. However, because the General Plan would result in the conversion of farmland to non-agricultural land uses, the GP PEIR concludes that impacts on Important Farmland would be significant and unavoidable. Furthermore, the loss of agricultural land would result in a considerable contribution to a significant and unavoidable cumulative impact (Impact #3.2-6) (City of Merced 2010).

Annexation of UC Merced would not convert additional Important Farmland to non-agricultural use. Although the GP PEIR evaluated the development and annexation of the UC Merced campus as proposed in the 2009 LRDP, and buildout of the 2020 LRDP (the current planning document for development of the UC Merced campus) would result in the conversion of an additional 16 acres of Important Farmland, the entire area is within the SUDP/SOI evaluated in the GP PEIR and identified for conversion from agricultural uses. (The area added to the UC Merced campus was previously part of the area owned by the University of California Land Company LLC (UCLC), a joint venture between the Virginia Smith Trust (VST) and the UC Regents, and envisioned for development that would complement the university. Therefore, the GP PEIR considered conversion of the entire area.) Further, UC Merced has placed enough Important Farmland under conservation easements to compensate for the conversion of Important Farmland to campus uses (UC Merced 2018a). This is consistent with the requirements of Mitigation Measure #3.2-1 in the GP PEIR.

Based on the above discussion, annexation of the UC Merced campus would not substantially increase the severity of impacts on Important Farmland. Therefore, the findings of the GP PEIR regarding the conversion of Important Farmland remain valid and no new mitigation is required. This impact would remain significant and unavoidable.

b) Conflict with existing zoning for agricultural use or a Williamson Act contract?

Page 3.2-6 of the GP PEIR discusses the potential for General Plan implementation to conflict with existing zoning for agricultural use or a Williamson Act contract (Impact #3.2-2). As stated in the GP PEIR, development in the planning area would affect approximately 8,758 acres of land currently designated for agricultural use by the County of Merced, of which approximately 71 acres are subject to Williamson Act Contracts. Although the General Plan includes Policy OS-2.1 and implementation actions to protect agricultural land and minimize conflicts between urban and agricultural land uses, the GP PEIR concludes that impacts related to conflicts with existing agricultural zoning and Williamson Act contracts would be potentially significant. No mitigation was available to reduce these impacts. Therefore, the GP PEIR concludes that impacts related to conflicts with existing agricultural zoning and Williamson Act contracts would be significant and unavoidable.

The area proposed for annexation is within the 8,758 acres of agricultural land where potential impacts due to land use conflicts were disclosed in the adopted GP PEIR. The area north and east of the UC Merced campus outside of the SUDP/SOI evaluated in the GP PEIR is within an area zoned as Exclusive Agricultural (A-2) by Merced County (Merced County n.d.). This includes Lake Yosemite and Lake Yosemite Regional Park managed by Merced County and the Merced Vernal Pools and Grassland Reserve established by UC Merced. Land to the south is zoned as General Agriculture (A-2) and was also evaluated as an area of potential urban expansion in the GP PEIR. Furthermore, no portion of the annexation area is under a Williamson Act contract (UC Merced 2019). There is land under a Williamson Act contract to the southeast; however, this area would be buffered from the developed portion of the university by passive open space.

Based on the above discussion, annexation of the UC Merced campus would not substantially increase the severity of impacts related to conflicts with existing agricultural zoning and Williamson Act contracts that were identified in the GP PEIR. Therefore, the findings of the GP PEIR regarding conflicts with existing agricultural zoning and Williamson Act contracts remain valid and no new mitigation is required. This impact would remain significant and unavoidable.

c) Conflict with existing zoning for, or cause rezoning of, forest land (as defined in Public Resources Code section 12220(g)), timberland (as defined by Public Resources Code section 4526), or timberland zoned Timberland Production (as defined by Government Code section 51104(g))?

Page 3.2-7 of the GP PEIR discusses the potential for General Plan implementation to conflict with zoning for, or cause rezoning of, forest land, timberland, or timberland zoned Timberland Production (Impact #3.2-3). As stated in the GP PEIR, there is no forest land or timberland within the planning area. Therefore, the GP PEIR concluded that there would be no impact on forest land or timberland, and no cumulative impacts were identified (City of Merced 2010).

Annexation of the UC Merced campus would not result in any new impacts on forest land or timberland. There are no areas in the annexation area that are zoned as forest land or timberland (UC Merced 2018a). Therefore, the findings of the GP PEIR regarding forest land or timberland remain valid and no new mitigation is required. There would continue to be no impact.

d) Result in the loss of forest land or conversion of forest land to non-forest use?

Refer to Section 3.4.2(c). There is no forest land within the planning areas for the City of Merced General Plan and the UC Merced LRDP. Therefore, annexation of the UC Merced campus would not result in any new impacts on forest land. The findings of the GP PEIR regarding forest land remain valid and no new mitigation is required. There would continue to be no impact.

e) Involve other changes in the existing environment, which, due to their location or nature, could result in conversion of Farmland to non-agricultural use or conversion of forest land to non-forest use?

The GP PEIR (Impact 3.2-5) provides cross reference to Impacts 3.2-1, 3.2-3, and 3.2-4 and concludes that there would be no impacts beyond those disclosed above (refer to Sections 3.4.2(a), 3.4.2(c), and 3.4.2(d)). As discussed above, the General Plan includes Policy OS-2.1 and implementation actions to minimize conflicts between urban and agricultural land uses. The area proposed for annexation is within the 8,758 acres of agricultural land where potential impacts due to land use conflicts were disclosed in the adopted GP PEIR. The area north and east of the UC Merced campus outside of the SUDP/SOI evaluated in the GP PEIR is within an area zoned as Exclusive Agricultural (A-2) by Merced County (Merced County n.d.). This includes Lake Yosemite and Lake Yosemite Regional Park managed by Merced County and the Merced Vernal Pools and Grassland Reserve established by UC Merced. Due to existing uses and land use restrictions, these areas would not convert to nonagricultural uses as a result of development or annexation of UC Merced. The agricultural land to the southeast would be buffered from the developed portion of the university by passive open space.

Land to the south of the campus is zoned as General Agriculture (A-2). This area was evaluated as an area of potential urban expansion in the GP PEIR. Therefore, although annexation of the UC Merced campus would make this area eligible for subsequent annexation into the City, the conversion of this land to non-agricultural use was evaluated in the GP EIR. The annexation would not result in a new or more substantial impact than previously disclosed.

The GP PEIR and the 2020 LRDP SEIR do not identify impacts related to the conversion of Farmland and forest land from implementation of the General Plan and 2020 LRDP. The findings of the GP PEIR regarding the conversion of Farmland and forest land remain valid and no new mitigation is required. There would continue to be no impact.

3.4.3 Mitigation Measures

The following mitigation measure was adopted upon approval of the General Plan to address impacts associated with conversion of Farmland. UC Merced has placed enough Important Farmland under conservation easements to compensate for the conversion of Important Farmland to campus uses. As described above, annexation of UC Merced would not convert additional Important Farmland to non-agricultural use. No new mitigation measures are required.

Mitigation Measure #3.2-1: The City will encourage property owners outside the City limits but within the SUDP/SOI to maintain their land in agricultural production until the land is converted to urban uses. The City will also work cooperatively with land trusts and other non-profit organizations to preserve agricultural land in the region. This may include the use of conservation easements. Infill development will be preferred and encouraged over fringe development. Sequential and contiguous development is also preferred and encouraged over leap-frog development.

3.4.4 Conclusion

There are no significant impacts that are peculiar to the project. No new impacts have occurred nor has any new information been found requiring new analysis or verification. The project would not have any potentially significant impacts or cumulative impacts that were not discussed in the GP PEIR. Therefore, the conclusions of the GP PEIR remain valid and approval of the project would not require additional environmental review.

3.5 AIR QUALITY

ENVIRONMENTAL ISSUES	Impact Examined in GP PEIR?	Could Annexation Result in a New or Substantially More Severe Impact?*	Are there Changes in Circumstance or New Information Available that Could Result in a Substantially More Severe Impact?	Do Mitigation Measures and/or Design Features Address/ Resolve Impacts, Including Impacts That Would Otherwise be New or Substantially More Severe?
Are significance criteria established by the applicable air district available to rely on for significance determinations?	Yes. The San Joaquin Valley Air Pollution Control District (SJVAPCD) has adopted CEQA air quality thresholds of significance for criteria pollutants and toxic air contaminants (SJVAPCD 2015 and n.d.).			
Would the project:				
a) Conflict with or obstruct implementation of the applicable air quality plan?	Not Analyzed	No	No	N/A
b) Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable federal or state ambient air quality standard?	Impact #3.3-1: Construction activities associated with development under the Merced Vision 2030 General Plan would result in criteria pollutants, ozone precursors, and other pollutants, pp. 3.3-18 to 3.3-21 Impact #3.3-2: Development and operation under the General Plan would result in emissions of criteria pollutants, ozone precursors, and other pollutants caused by mobile source activity, area sources, and stationary sources, pp. 3.3-21 to 3.3-24	No	No	Yes
c) Expose sensitive receptors to substantial pollutant concentrations?	Impact #3.3-3: Development and Operation under the General Plan would Expose Sensitive Receptors to Pollutant Concentration, pp. 3.3-24 and 3.3-25	No	No	N/A
d) Result in other emissions (such as those leading to odors) adversely affecting a substantial number of people?	Impact #3.3-4: Implementation of the General Plan Update Would Create Odor Impacts, pp. 3.3-25	No	No	N/A

*Determination does not factor implementation of previously adopted mitigation.

3.5.1 Environmental Setting

The GP PEIR describes existing ambient air quality, as well as trends for several key pollutants including ozone and carbon monoxide. Since certification of the GP PEIR, the San Joaquin Valley Air Basin continues to be in non-attainment for the federal ozone (8-hour) and fine particulate matter (PM_{2.5}) standards, as well as the State ozone (1-hour and 8-hour), PM_{2.5}, and coarse particulate matter (PM₁₀) standards (SJVAPCD 2012). In 2014, the San Joaquin Valley Air Basin demonstrated attainment of the federal ozone (1-hour) standard (SJVAPCD 2021).

As the air district for the San Joaquin Valley Air Basin, the San Joaquin Valley Air Pollution Control District (SJVAPCD) is responsible for periodically revising air quality attainment plans to reflect changing air basin conditions and federal and State requirements. The SJVAPCD adopted several new air quality attainment plans since the GP PEIR was certified, which include the following:

- ▶ 2012 PM_{2.5} Plan
- ▶ 2015 Plan for the 1997 PM_{2.5} Standard
- ▶ 2016 Moderate Area Plan for the 2012 PM_{2.5} Standard
- ▶ 2018 Plan for the 1997, 2006, and 2012 PM_{2.5} Standard
- ▶ 2013 Plan for the Revoked 1-Hour Ozone Standard
- ▶ 2014 Reasonably Available Control Technology (RACT) Demonstration for Ozone State Implementation Plans
- ▶ 2016 Plan for the 2008 8-Hour Ozone Standard
- ▶ 2020 RACT Demonstration

3.5.2 Discussion

a) Conflict with or obstruct implementation of the applicable air quality plan?

The GP PEIR does not specifically evaluate the potential for implementation of the General Plan, including development of the UC Merced campus in accordance with the 2009 LRDP, to conflict with or obstruct implementation of the applicable air quality plan. However, as discussed in Section 3.5.2(b) below, implementation of the General Plan would result in significant, cumulative, and unavoidable impacts related to increases of criteria pollutants for which the San Joaquin Valley Air Basin has non-attainment status. Therefore, implementation of the General Plan could have resulted in potentially significant conflicts with implementation of SJVAPCD air quality attainment plans that were applicable at the time the GP PEIR was certified. Applicable air quality plans would have included the 2007 PM₁₀ Maintenance Plan, 2008 PM_{2.5} Plan, 2007 Ozone Plan, 2009 RACT Demonstration for Ozone State Implementation Plans, and 2004 Carbon Monoxide Maintenance Plan.

However, SJVAPCD's air quality plans and emissions inventories are based on existing and projected land use development as determined in the most recent local general plans and regional transportation plans. If a proposed project is inconsistent with the planned land use designations that were used to inform an air quality plan, that project could conflict with and obstruct implementation of air quality planning efforts. Projects that are consistent with growth anticipated in an air quality plan would not conflict or obstruct implementation of the air quality plan.

Development of UC Merced has been incorporated into the applicable planning documents, including the General Plan, that inform the growth projections used in the development of applicable air quality plans. Therefore, development of the campus is reflected in the SJVAPCD's air quality plans and implementation of the 2020 LRDP would not conflict with or obstruct implementation of the applicable air quality plan. The effect of campus buildout under the 2020 LRDP with respect to the regional air quality management plan would, of itself, be less than significant (UC Merced 2019: 4.1-33). Annexation of UC Merced would not result in an increased potential to conflict with an applicable air quality plan. Therefore, a new impact would not occur, and no new mitigation is required.

b) Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable federal or state ambient air quality standard?

Pages 3.3-18 to 3.3-24 of the GP PEIR discuss the potential for General Plan implementation to result in criteria pollutants, ozone precursors, and other pollutants during construction (Impact #3.3-1) and operation (Impact #3.3-2). As stated in the GP PEIR, construction activities associated with development under the General Plan would result in short-term emissions of various air pollutants, including reactive organic gas (ROG), nitrous oxide (NO_x) particulate matter PM₁₀ and PM_{2.5}, and carbon dioxide (CO₂). Construction projects would be required to (1) comply with applicable SJVAPCD regulations, including Regulation VIII, which includes measures to reduce dust generation; (2) prepare and implement a Dust Control Plan; and (3) implement additional "enhanced control measures," such as installation of erosion controls and windbreaks where appropriate. Although compliance with SJVAPCD regulations would reduce air quality impacts, the GP PEIR concluded that impacts related to the generation of pollutants would be potentially significant for construction projects that exceed 22 acres. Mitigation Measure #3.3-1a includes additional measures to reduce the generation of dust and other air pollutant emissions from construction activities. The GP PEIR concludes that impacts from construction exhaust emissions would be reduced to a less than significant level (City of Merced 2010) with mitigation.

During operation, new development projects and associated vehicle traffic would contribute to increased emissions of criteria pollutants, ozone precursors, and other pollutants. Each development proposal would be required to complete a project-specific analysis to determine whether emissions would exceed SJVAPCD thresholds. Although individual projects would be required to comply with SJVAPCD rules and include measures to reduce emissions, operational emissions of ROG, NO_x, CO, PM₁₀, and PM_{2.5} would be potentially significant. Mitigation Measure #3.3-2 includes Best Available Control Technology, mitigation, and energy conservation requirements for new discretionary permits. Although Mitigation Measure #3.3-2 would reduce air quality impacts, emissions would still exceed SJVAPCD thresholds for ROG, NO_x, CO, PM₁₀, and PM_{2.5}. Therefore, the GP PEIR concludes that operational impacts would be significant, cumulative, and unavoidable (City of Merced 2010).

Annexation of UC Merced would not result in additional criteria pollutants associated with construction or operation. The GP PEIR evaluated the development and annexation of the UC Merced campus, as proposed in the 2009 LRDP. Therefore, impacts related to an increase of criteria air pollutants and ozone precursors from development of the UC Merced campus in accordance with the 2009 LRDP are consistent with the impacts from implementation of the GP PEIR, described above. The 2020 LRDP, which is the current planning document for development of the UC Merced campus, plans for less growth in a larger area. The entire campus, as reflected in the 2020 LRDP, is within the SUDP/SOI evaluated in the GP PEIR.

The 2020 LRDP SEIR, which evaluates the potential for development of the UC Merced campus in accordance with the 2020 LRDP to result in construction and operational emissions that would involve a cumulatively considerable net increase of criteria pollutants for which the San Joaquin Valley Air Basin is non-attainment, concluded that impacts would be less than significant. Based on emissions modeling, construction of campus facilities under the 2020 LRDP would not result in emissions that would exceed SJVAPCD thresholds for any pollutants. UC Merced has also committed to requiring the use of Tier 4 equipment and incorporating measures from SJVAPCD Regulation VIII to reduce fugitive dust impacts in all construction contract specifications (LRDP MM AQ-1a and MM AQ-1b) (UC Merced 2019).

Based on emissions modeling, implementation of the 2020 LRDP would result in operational ROG and NO_x emissions that would exceed applicable thresholds. UC Merced has committed to measures to reduce emissions from vehicles and other energy sources (LRDP MM AQ-2a and MM AQ-2b). With mitigation, NO_x emissions would still exceed SJVAPCD thresholds and contribute to cumulatively considerable net increases in ozone. However, because UC Merced is projected to grow at a slower pace than previously anticipated, development of the UC Merced campus in accordance with the 2020 LRDP would not result in emissions that would exceed the emissions projected under the 2009 LRDP (UC Merced 2019).

Based on the above discussion, annexation of the UC Merced campus would not result in any new impacts or substantially increase the severity of impacts related to cumulatively considerable net increases of criteria pollutants that were identified for the 2009 LRDP, as evaluated in the GP PEIR. Therefore, the findings of the GP PEIR regarding cumulatively considerable net increases of criteria pollutants remain valid and no new mitigation is required. Construction impacts would remain less than significant and operational impacts would remain significant and unavoidable.

c) Expose sensitive receptors to substantial pollutant concentrations?

Pages 3.3-24 and 3.3-25 of the GP PEIR discuss the potential for General Plan implementation to expose sensitive receptors to substantial pollutant concentrations. As stated in the GP PEIR, development within the planning area has potential to result in the location of sensitive receptors near sources of hazardous air pollutants. However, developments that are large sources of hazardous air pollutants are required to (1) adhere to General Plan policies; (2) comply with SJVAPCD's Air Toxics Program and obtain applicable SJVAPCD permits; (3) comply with Mitigation Measures #3.3-1 and #3.3-2; and (4) if necessary, complete a project-specific Health Risk Assessment. The GP PEIR also states that development within the planning area could result in carbon monoxide (CO) hotspots from increased vehicle traffic; however, these impacts would be reduced through compliance with SJVAPCD and General Plan policies aimed at reducing vehicle trips and, if necessary, site-specific analysis of traffic impacts. The GP PEIR concludes that impacts related to exposing sensitive receptors to substantial pollutant concentrations would be less than significant, and no cumulative impacts were identified (City of Merced 2010).

Annexation of UC Merced would not expose additional sensitive receptors to substantial pollutant concentrations. The GP PEIR evaluated the development and annexation of the UC Merced campus, as proposed in the 2009 LRDP. The 2020 LRDP is the current planning document for development of the UC Merced campus. The 2020 LRDP SEIR evaluated the potential for development of the UC Merced campus in accordance with the 2020 LRDP to expose sensitive receptors to substantial pollutant concentrations. The 2020 LRDP SIER concludes that buildout of the 2020 LRDP would not introduce substantial sources of toxic air contaminants and PM_{2.5}. In addition, buildout of the 2020 LRDP would not increase traffic volumes in a manner that would result in the violation of CO standards or expose sensitive receptors to substantial CO concentrations. Therefore, development of the UC Merced campus in accordance with the 2020 LRDP would not expose sensitive receptors to substantially greater pollutant concentrations than those projected under the 2009 LRDP (UC Merced 2019). Furthermore, no new pollutant sources or sensitive receptors would be introduced during the annexation process.

Based on the above discussion, annexation of the UC Merced campus would not result in any new impacts on sensitive receptors from exposure to pollutant concentrations. Therefore, the findings of the GP PEIR regarding impacts on sensitive receptors remain valid and no new mitigation is required. This impact would remain less than significant.

d) Result in other emissions (such as those leading to odors) adversely affecting a substantial number of people?

Pages 3.3-25 and 3.3-26 of the GP PEIR discuss the potential for General Plan implementation to create odor impacts (Impact #3.3-4). As stated in the GP PEIR, construction activities associated with development in the planning area would generate odors; however, these odors would be temporary and short-term and would quickly dissipate from the source. Operational odors would be minor and subject to applicable General Plan policies related to the location, design, and construction of new developments to prevent incompatible uses and minimize effects to sensitive receptors. The GP PEIR concludes that impacts related to odors would be less than significant, and no cumulative impacts were identified (City of Merced 2010).

Similarly, odors from construction activities on the UC Merced campus would be short-term and temporary and not pervasive enough to affect a substantial number of people. In addition, routine operation of the campus would not include activities that typically produce odors, such as wastewater treatment, manufacturing, and agriculture (UC Merced 2018a).

Annexation of the UC Merced campus would not result in any new impacts related to odors. Therefore, the findings of the GP PEIR regarding odors remain valid and no new mitigation is required. This impact would remain less than significant.

3.5.3 Mitigation Measures

The following mitigation measures were adopted upon approval of the General Plan to address air quality impacts.

Mitigation Measure #3.3-1a: For any phase of construction in which an area greater than 22 acres, in accordance with Regulation VIII of the SJVAPCD, will be disturbed on any one day, the project developer(s) shall implement the following measures:

1. Basic fugitive dust control measures are required for all construction sites by SJVAPCD Regulation VIII.
2. Install sandbags or other erosion control measures to prevent silt runoff to public roadways from sites with a slope greater than one percent.
3. Traffic speeds on unpaved roads shall be no greater than 15 mph.
4. Install wind breaks at windward side(s) of construction areas.

Mitigation Measure #3.3-1b: To reduce emissions and thus reduce cumulative impacts, the City of Merced shall consider adoption of an ordinance requiring the following measures to be implemented in conjunction with construction projects within the City:

1. The idling time of all construction equipment used in the plan area shall not exceed ten minutes when practicable.
2. The hours of operation of heavy-duty equipment shall be minimized when practicable.
3. All equipment shall be properly tuned and maintained in accord with manufacturer's specifications when practicable.
4. When feasible, alternative fueled or electrical construction equipment shall be used at the project site.
5. The minimum practical engine size for construction equipment shall be used when practicable.
6. When feasible, electric carts or other smaller equipment shall be used at the project site.
7. Gasoline-powered equipment shall be equipped with catalytic converters when practicable.

Mitigation Measure #3.3-2: The following BACT (Best Available Control Technology) installations and mitigation shall be considered for new discretionary permits, to the extent feasible as determined by the City:

- ▶ Trees shall be carefully selected and located to protect building(s) from energy consuming environmental conditions, and to shade paved areas when it will not interfere with any structures. Trees should be selected to shade paved areas that will shade 50% of the area within 15 years. Structural soil should be used under paved areas to improve tree growth.
- ▶ If transit service is available to a project site, development patterns and improvements shall be made to encourage its use. If transit service is not currently available, but is planned for the area in the future, easements shall be reserved to provide for future improvements such as bus turnouts, loading areas, route signs and shade structures.
- ▶ Multi-story parking facilities shall be considered instead of parking lots to reduce exposed concrete surface and save green space.
- ▶ Sidewalks and bikeways shall be installed throughout as much of any project as possible, in compliance with street standards, and shall be connected to any nearby existing and planned open space areas, parks, schools, residential areas, commercial areas, etc., to encourage walking and bicycling.

- ▶ Projects shall encourage as many clean alternative energy features as possible to promote energy self-sufficiency. Examples include (but are not limited to): photovoltaic cells, solar thermal electricity systems, small wind turbines, etc. Rebate and incentive programs are offered for alternative energy equipment.

As many energy-conserving features as possible shall be included in the individual projects. Energy conservation measures include both energy conservation through design and operational energy conservation. Examples include (but are not limited to):

- ▶ Increased energy efficiency (above California Title 24 Requirements)
- ▶ Energy efficient windows (double pane and/or Low-E)
- ▶ Use Low and No-VOC coatings and paints
- ▶ High-albedo (reflecting) roofing material
- ▶ Cool Paving. "Heat islands" created by development projects contribute to the reduced air quality in the valley by heating ozone precursors
- ▶ Radiant heat barrier
- ▶ Energy efficient lighting, appliances, heating and cooling systems
- ▶ Install solar water-heating system(s)
- ▶ Install photovoltaic cells
- ▶ Install geothermal heat pump system(s)
- ▶ Programmable thermostat(s) for all heating and cooling systems
- ▶ Awnings or other shading mechanism for windows
- ▶ Porch, patio and walkway overhangs
- ▶ Ceiling fans, whole house fans
- ▶ Utilize passive solar cooling and heating designs (e.g. natural convection, thermal flywheels)
- ▶ Utilize daylighting (natural lighting) systems such as skylights, light shelves, interior transom windows, etc.
- ▶ Electrical outlets around the exterior of the unit(s) to encourage use of electric landscape maintenance equipment
- ▶ Bicycle parking facilities for patrons and employees in a covered secure area. Bike storage should be located within 50' of the project's entrance. Construct paths to connect the development to nearby bikeways or sidewalks
- ▶ On-site employee cafeterias or eating areas
- ▶ Low or non-polluting landscape maintenance equipment (e.g. electric lawn mowers, reel mowers, leaf vacuums, electric trimmers and edger's, etc.)
- ▶ Pre-wire the unit(s) with high speed modem connections/DSL and extra phone lines
- ▶ Natural gas fireplaces (instead of wood-burning fireplaces or heaters)
- ▶ Natural gas lines (if available) and electrical outlets in backyard or patio areas to encourage the use of gas and/or electric barbecues
- ▶ Low or non-polluting incentives items should be provided with each residential unit (such items could include electric lawn mowers, reel mowers, leaf vacuums, gas or electric barbecues, etc.)

As described above, UC Merced has committed to project-specific measures to address air quality impacts. UC Merced has committed to requiring the use of Tier 4 equipment and incorporating measures from SJVAPCD Regulation VIII to reduce fugitive dust impacts in all construction contract specifications (LRDP MM AQ-1a and MM AQ-1b). This would achieve the same reductions as Mitigation Measures 3.3-1a and 3.3-1b in the GP PEIR. UC Merced has also committed to measures to reduce emissions from vehicles and other energy sources (LRDP MM AQ-2a and MM AQ-2b) that would require similar emissions reductions to Mitigation Measure 3.3-2 in the GP PEIR. See Appendix A for the full text of the mitigation measures adopted for the 2020 LRDP. No new mitigation measures are required.

3.5.4 Conclusion

There are no significant impacts that are peculiar to the project. No new impacts have occurred nor has any new information been found requiring new analysis or verification. The project would not have any potentially significant impacts or cumulative impacts that were not discussed in the GP PEIR. Therefore, the conclusions of the GP PEIR remain valid and approval of the project would not require additional environmental review.

3.6 BIOLOGICAL RESOURCES

ENVIRONMENTAL ISSUES	Impact Examined in GP PEIR?	Could Annexation Result in a New or Substantially More Severe Impact?*	Are there Changes in Circumstance or New Information Available that Could Result in a Substantially More Severe Impact?	Do Mitigation Measures and/or Design Features Address/Resolve Impacts, Including Impacts That Would Otherwise be New or Substantially More Severe?
Would the project:				
a) Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special-status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Wildlife or the U.S. Fish and Wildlife Service?	Impact #3.4-1: Result in substantial adverse impacts on candidate, special-status, or sensitive species, pp. 3.4-35 to 3.4-40	No	No	Yes
b) Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, or regulations or by the California Department of Fish and Wildlife or the U.S. Fish and Wildlife Service?	Impact #3.4-2: Result in substantially adverse affect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, and regulations of by the CDFG or USFWS, p. 3.4-40	No	No	Yes
c) Have a substantial adverse effect on state or federally protected wetlands (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means?	Impact #3.4-3: Result in substantially adverse affect on federally protected wetlands through direct removal, filling, hydrological interruption or other means, pp. 3.4-40 to 3.4-41	No	No	Yes
d) Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites?	Impact #3.4-4: Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors or impeded the use of native wildlife nursery sites, pp. 3.4-41 to 3.4-42	No	No	Yes

ENVIRONMENTAL ISSUES	Impact Examined in GP PEIR?	Could Annexation Result in a New or Substantially More Severe Impact?*	Are there Changes in Circumstance or New Information Available that Could Result in a Substantially More Severe Impact?	Do Mitigation Measures and/or Design Features Address/Resolve Impacts, Including Impacts That Would Otherwise be New or Substantially More Severe?
e) Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?	Impact #3.4-5: Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance, p. 3.4-42	No	No	N/A
f) Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan?	Impact #3.4-6: Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan, p. 3.4-42	No	No	N/A

*Determination does not factor implementation of previously adopted mitigation.

3.6.1 Environmental Setting

The GP PEIR describes biological communities and habitat types, special-status species, sensitive natural communities, and wildlife movement corridors. Based on review of aerial photography and materials prepared for UC Merced, these general descriptions continue to apply to the area within the SUDP/SOI or immediate vicinity of the UC Merced campus. Applicable Federal, State, and local regulations also remain consistent with the explanations provided in the GP PEIR. The environmental setting related to biological resources, described in the GP PEIR Section 3.4, "Biological Resources," remains applicable to this analysis. No substantial change in the environmental setting related to biological resources has occurred since certification of the GP PEIR.

3.6.2 Discussion

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

Pages 3.4-35 to 3.4-40 of the GP PEIR include a discussion regarding impacts on several special-status plant and wildlife species and determined that impacts on these species would be potentially significant due to the presence of habitat suitable for these species in areas where future development projects may occur (Impact #3.4-1). Mitigation Measures #3.4-1a through #3.4-1i would require development projects to conduct focused surveys for special-status plants and wildlife, implement protective measures if these resources are detected (e.g., protective buffers), and prepare a mitigation and monitoring plan if impacts on special-status plants cannot be avoided. The GP PEIR concludes that impacts on special-status species would be less than significant with mitigation.

Similarly, the 2020 LRDP SEIR concludes that impacts on special-status plants would be less than significant and would not contribute substantially to a cumulative impact because, while several special-status plant species have been detected during focused surveys of the project site, these occurrences have been preserved, and additional

habitat suitable for these species (i.e., vernal pools) has been preserved. The 2020 LRDP SEIR concluded that impacts on special-status wildlife would be less than significant through implementation of previously identified environmental commitments (e.g., creation and preservation of vernal pool habitat, establishment of conservation lands, implementation of the University's Construction Mitigation Plan, incidental take permits and requirements therein, consultation with U.S. Fish and Wildlife Service [USFWS] and California Department of Fish and Wildlife [CDFW]). This is consistent with Mitigation Measures #3.4-1a through #3.4-1i in the GP PEIR.

Based on the discussion above, annexation of the UC Merced campus would not result in any new impacts related to special-status species because impacts on these features have already been addressed through previously identified environmental commitments or will be addressed through mitigation measures described in the 2020 LRDP SEIR. Therefore, the findings of the GP PEIR regarding this impact remain valid, and no new mitigation is required. This impact would remain less than significant with mitigation.

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

Page 3.4-40 of the GP PEIR include a discussion regarding impacts on riparian habitat and sensitive natural communities and determined that impacts on these resources would be potentially significant, because riparian habitat and sensitive natural communities (e.g., vernal pools) occur within the plan area (Impact #3.4-2). Mitigation Measure #3.4-2 would require development projects to obtain a qualified biologist to map all riparian habitat and other sensitive natural communities, avoid these resources as possible, or mitigate for unavoidable impacts on a no-net-loss basis. The GP PEIR concludes that impacts on riparian habitat and other sensitive natural communities would be less than significant with mitigation.

The GP PEIR evaluated the development and annexation of the UC Merced campus, as proposed in the 2009 LRDP. Therefore, impacts on riparian habitat and other sensitive natural communities from development of the UC Merced campus in accordance with the 2009 LRDP are consistent with the impacts from implementation of the GP PEIR, described above.

Many of the potential effects of developing the UC Merced campus have been addressed through State and Federal permits obtained jointly by UCLC and UC Merced. In 2009, following the preparation and approval of an environmental impact statement, completion of a 404 (b)(1) analysis, and other requirements, including Section 106 and Section 7 consultations, U.S. Army Corps of Engineers (USACE) issued a Department of Army permit to UC Merced and UCLC, authorizing the filling of all 77.79 acres of jurisdictional waters on the UC Merced campus and University Community North sites, including 40.08 acres of vernal pools and swales, 0.33 acre of clay slope wetlands, 12.23 acres of irrigated wetlands, and 25.15 acres of canal wetlands (UC Merced 2019). Through the 404 permit process, the Merced Vernal Pools and Grassland Reserve was established. These lands were preserved as mitigation and are protected from damage and development in perpetuity under conservation easements. Located northeast of the campus, the reserve consists of the 5,030-acre VST Preserve, the 1,339-acre Campus Natural Reserve, and the 91-acre Myers Easterly property reserve.

The 2009 LRDP EIR concludes that impacts on riparian habitat were less than significant and would not contribute substantially to a cumulative impact through implementation of previously identified environmental commitments and as a result, the 2020 LRDP SEIR does not include a discussion regarding impacts on riparian habitat. The 2020 LRDP SEIR concluded that impacts on vernal pool habitat, which would be considered sensitive natural communities, would be less than significant because most of the identified impacts on wetlands evaluated in the 2009 LRDP EIR have been analyzed, disclosed, permitted, and mitigated (i.e., except for approximately 4.8 acres of vernal pools and swales) on a no-net-loss basis. Impacts on the few remaining vernal pools that would be affected by campus development would likely be adequately mitigated by existing compensatory habitat established by UC Merced such that there would be no net loss.

Based on the discussion above, annexation of the UC Merced campus would not result in any new impacts related to riparian habitat and other sensitive natural communities because impacts on these features have already been analyzed, disclosed, permitted, and mitigated as described in the 2020 LRDP SEIR. Therefore, the findings of the GP PEIR regarding this impact remain valid, and no new mitigation is required. This impact would remain less than significant.

c) Have a substantial adverse effect on state or federally protected wetlands (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means?

Pages 3.4-40 to 3.4-41 of the GP PEIR includes a discussion regarding impacts on waters of the United States and determined that because federally protected wetlands and jurisdictional waters of the United States are present throughout the plan area, impacts on these resources would be potentially significant (Impact #3.4-3). Mitigation Measures #3.4-3a and #3.4-3b would require development projects to conduct a delineation of waters of the United States, to obtain permits for fill of federal wetlands or other waters of the United States, and to replace or rehabilitate these resources on a no-net-loss basis. The GP PEIR concludes that impacts on federally protected wetlands would be less than significant with mitigation.

Since certification of the GP PEIR, the sample threshold provided in Appendix G of the State CEQA Guidelines has been changed to include waters of the state, some of which may be waters that are not under the jurisdiction of the USACE (i.e., waters of the United States). As a result, waters of the state may not be included in the GP PEIR analysis and compensated through implementation and Mitigation Measures #3.4-3a and #3.4-3b.

Wetland delineation surveys have been performed for the UC Merced campus that included waters of the United States and waters of the state. Identified impacts on wetlands have been analyzed, disclosed, permitted, and mitigated on a no-net-loss basis. Future impacts on the few remaining wetlands anticipated to be affected by campus may be adequately mitigated by existing compensatory wetlands such that there would be no net loss (UC Merced 2018a). Any additional development would be addressed as disclosed in the 2020 LRDP EIR, which would be consistent with GP PEIR Mitigation Measures #3.4-3a and #3.4-3b.

Despite the fact that the GP PEIR did not analyze impacts on state-protected wetlands, based on the discussion above, annexation of the UC Merced campus would not result in any new impacts related to state or federally protected wetlands because impacts on these features have already been analyzed, disclosed, permitted, and mitigated as described in the 2020 LRDP SEIR. Therefore, the findings of the GP PEIR regarding this impact remain valid, and no new mitigation is required. This impact would remain less than significant with implementation of mitigation.

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

Pages 3.4-41 to 3.4-42 of the GP PEIR include a discussion regarding impacts on wildlife movement corridors and wildlife nurseries and determined that impacts on wildlife movement corridors would be less than significant because the plan area is not located within a designated wildlife corridor or linkage area for sensitive or other wildlife species (Impact #3.4-4). However, the GP PEIR also determined that while not considered a wildlife nursery, implementation of construction activities within the plan area could result in disturbance to nesting birds. Mitigation Measure #3.4-1e would require development projects to implement preconstruction surveys for nesting birds and protective measures if active nests are detected. The GP PEIR concludes that impacts on nesting birds would be less than significant with mitigation.

San Joaquin kit fox could use the UC Merced campus as a dispersal corridor; however, the 2020 LRDP SEIR concluded that impacts on movement of San Joaquin kit foxes would be less than significant because requirements under a USFWS Biological Opinion and a CDFW incidental take permit would be implemented, as described in the 2009 LRDP EIR and 2020 LRDP SEIR, which would minimize potential impacts on dispersing kit foxes. Nesting birds could also use the UC Merced Campus as nursery sites. The 2020 LRDP SEIR concludes that impacts on nesting birds would be less

than significant with implementation of Mitigation Measure BIO-9a that would require focused surveys for nesting birds and protective measures for active nests and Mitigation Measure BIO-9b related to bird-safe design for new buildings and structures (UC Merced 2018a). This is analogous to the preconstruction surveys required pursuant to GP PEIR Mitigation Measure #3.4-1e.

Based on the discussion above, annexation of the UC Merced campus would not result in any new impacts related to wildlife movement corridors and wildlife nursery sites. Therefore, the findings of the GP PEIR regarding this impact remain valid, and no new mitigation is required. This impact would remain less than significant.

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

Page 3.4-42 of the GP PEIR includes a discussion regarding potential conflict with local policies or ordinances protecting biological resources and determined that there would be no impact (Impact #3.4-5). There are no local policies or ordinances that are applicable to the UC Merced campus (UC Merced 2018a). Annexation of the UC Merced campus would not result in any new impacts. Therefore, the findings of the GP PEIR regarding conflict with local policies or ordinances protecting biological resources remain valid, and no new mitigation is required. There would continue to be no impact.

f) Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan?

Page 3.4-42 of the GP PEIR includes a discussion regarding potential conflict with provisions of an adopted Habitat Conservation Plan (HCP) or Natural Community Conservation Plan (NCCP) and determined that there would be no impact because no HCP or NCCP had been adopted that encompasses the plan area (Impact #3.4-6). Because no HCPs, NCCPs or other local, regional, or state habitat conservation plans have been adopted that include the plan area, annexation of the UC Merced campus would not result in any new impacts. Therefore, the findings of the GP PEIR regarding conflict with HCPs, NCCPs, or other local, regional, or state habitat conservation plans remain valid, and no new mitigation is required. There would continue to be no impact.

3.6.3 Mitigation Measures

The following mitigation measures were adopted upon approval of the General Plan to mitigate impacts to biological resources.

Mitigation Measure #3.4-1a: Vernal Pools and Vernal Pool Associates.

To protect vernal pools and species associated with vernal pools including vernal pool smallscale, succulent owl's-clover, pincushion navarretia, Colusa grass, hairy Orcutt grass, spiny-sealed button celery, San Joaquin Orcutt grass, Greene's tuctoria, Conservancy fairy shrimp, vernal pool fairy shrimp, Midvalley fairy shrimp, vernal pool tadpole shrimp, California linderiella, and Molestan blister beetle, surveys shall be conducted to determine the presence of vernal pools prior to or concurrent with application for annexation in areas identified as having potential habitat.

Surveys to detect vernal pools are most easily accomplished during the rainy season or during early spring when pools contain water. If vernal pools are found to occur on a project site, the pools and a 100-foot-wide buffer around each pool or group of pools will be observed. If the vernal pools and buffer areas cannot be avoided, then the project proponent must consult with and obtain authorizations from, but not limited to, CDFW, USFWS, USACE, and the State Water Resources Quality Control Board.

Consultation and authorizations may require that additional surveys for special-status species be completed. Because there is a federal policy of no net loss of wetlands, mitigation to reduce losses and compensation to offset losses to vernal pools and associated special-status species will be required.

Mitigation Measure #3.4-1b: Special-Status Plants.

To protect special-status plants, the City shall ensure that a botanical survey be conducted for projects containing habitat suitable for special-status plant species. Surveys shall be conducted by a qualified biologist or botanist during the appropriate flowering season for the plants and shall be conducted prior to issuance of a grading or building permit for the project. If special-status plants are found to occur on the project site, the population of plants shall be avoided and protected. If avoidance and protection is not possible, then a qualified biologist will prepare a mitigation and monitoring plan for the affected species. The plan shall be submitted to the CDFG and/or the USFWS for review and comment. Details of the mitigation and monitoring plan shall include, but not be limited to:

- ▶ Removing and stockpiling topsoil with intact roots and seed bank in the disturbance area, and either replacing the soil in the same location after construction is complete or in a different location with suitable habitat; or
- ▶ Collect plants, seeds, and other propagules from the affected area prior to disturbance. After construction is complete, then the restored habitat will be replanted with propagules or cultivated nursery stock; or
- ▶ These and other mitigations will only be considered successful if the populations of the affected species are sustained for a minimum of three years and are of a similar size and quality as the original population.

Mitigation Measure #3.4-1c: Valley Elderberry Longhorn Beetle.

To protect the Valley elderberry longhorn beetle (VELB), the project proponent shall ensure that a survey for elderberry bushes be conducted by a qualified biologist at each project site containing habitat suitable for VELB prior to the issuance of a grading permit or building permit. If elderberry bushes are found, the project proponent shall implement the measures recommended by the biologist, which shall contain the standardized measures adopted by the USFWS.

Mitigation Measure #3.4-1d: Burrowing Owls.

To protect burrowing owls on proposed projects where suitable habitat exists, the following shall be implemented:

- ▶ To protect burrowing owls, preconstruction surveys shall be conducted by a qualified biologist at all project sites that contain grasslands, fallowed agricultural fields, or fallow fields along roadsides, railroad corridors, and other locations prior to grading. If, during a pre-construction survey, burrowing owls are found to be present, the project proponent shall implement the measures recommended by the biologist and include the standardized avoidance measures of CDFG

Mitigation Measure #3.4-1e: Special-Status Birds.

To protect raptors and other special-status birds on proposed projects where suitable habitat exists, the following measures shall be implemented:

- ▶ Trees scheduled to be removed because project implementation shall be removed during the non-breeding season (late September to the end of February).
- ▶ Prior to construction, but not more than 14 days before grading, demolition, or site preparation activities, a qualified biologist shall conduct a preconstruction nesting survey to determine the presence of nesting raptors. Activities taking place outside the breeding season (typically February 15 through August 31) do not require a survey. If active raptor nests are present in the construction zone or within 250-feet of the construction zone, temporary exclusion fencing shall be erected at a distance of 250-feet around the nest site. Clearing and construction operations within this area shall be postponed until juveniles have fledged and there is no evidence of a second nesting attempt determined by the biologist.

- ▶ If nesting Swainson's hawks are observed during field surveys, then consultation with the CDFG regarding Swainson's hawk mitigation guidelines shall be required. The guidelines include, but are not limited to, buffers of up to one quarter mile, monitoring of the nest by a qualified biologist, and mitigation for the loss of foraging habitat.
- ▶ To avoid impacts to common and special-status migratory birds pursuant to the Migratory Bird Treaty Act and CDFG codes, a nesting survey shall be conducted prior to construction activities if the work is scheduled between March 15 and August 31. If migratory birds are identified nesting within the construction zone, a 100-foot buffer around the nest site must be designated. No construction activity may occur within this buffer until a qualified biologist has determined that the young have fledged. A qualified biologist may modify the size of the buffer based on site conditions and the bird's apparent acclimation to human activities. If the buffer is modified, the biologist would be required to monitor stress levels of the nesting birds for at least one week after construction commences to ensure that project activities would not cause nest site abandonment or loss of eggs or young. At any time the biologist shall have the right to implement the full 100-foot buffer if stress levels are elevated to the extent that could cause nest abandonment and/or loss of eggs or young.

Mitigation Measure #3.4-1f: Special-Status Amphibians.

To protect California tiger salamander and western spadefoot on proposed projects where suitable habitat exists, the following shall be implemented:

- ▶ To protect special-status amphibians, preconstruction surveys shall be conducted by a qualified biologist at all project sites that contain appropriate habitat. If, during a pre-construction survey, special-status amphibians are found to be present, the project proponent shall implement the measures recommended by the biologist and standardized measures adopted by the USFWS or the CDFG.

Mitigation Measure #3.4-1g: Special-Status Reptiles.

To protect western pond turtle and giant garter snake on proposed projects where suitable habitat exists, the following shall be implemented:

- ▶ To protect special-status reptiles, preconstruction surveys shall be conducted by a qualified biologist at all project sites that contain appropriate habitat. If, during a pre-construction survey, special-status reptiles are found to be present, the project proponent shall implement the measures recommended by the biologist and standardized measures adopted by the USFWS or the CDFG.

Mitigation Measure #3.4-1h: Special-Status Fish.

To protect special-status fish, including hardhead on proposed projects where suitable habitat exists, the following shall be implemented:

- ▶ To protect special-status fish, preconstruction surveys shall be conducted by a qualified fish biologist at all project sites that contain appropriate habitat. If, during a pre-construction survey, special status fish are found to be present, the project proponent shall implement the measures recommended by the biologist and standardized measures adopted by the USFWS, National Marine Fisheries Service (NMFS) or the CDFG.

Mitigation Measure #3.4-1i: Special-Status Mammals.

To protect Merced kangaroo rat, western mastiff bat, western red bat, hoary bat, Yuma myotis, San Joaquin pocket mouse, American badger, and San Joaquin kit fox on proposed projects where suitable habitat exists, the following shall be implemented:

- ▶ To protect special-status mammals, preconstruction surveys shall be conducted by a qualified biologist at all project sites that contain appropriate habitat. If, during a pre-construction survey, special-status mammals are found to be present, the project proponent shall implement the measures recommended by the biologist and standardized measures adopted by the USFWS or the CDFG.

Mitigation Measure #3.4-2: Streambed Alteration Agreement.

To minimize impacts to riparian habitat and other sensitive natural communities, the following the measures shall be implemented when streambed alterations are proposed:

- ▶ The project proponent shall have a qualified biologist shall map all riparian habitat, or other sensitive natural communities. To the extent feasible and practicable, all planned construction activity shall be designed to avoid direct effects on these areas.
- ▶ In those areas where complete avoidance is not possible, then all riparian habitat, or other sensitive natural communities, shall be mitigated on a “no-net-loss” basis in accordance with either CDFG regulations and/or a Section 1602 Streambed Alteration Agreement, if required. Habitat mitigation shall be replaced at a location and with methods acceptable to CDFG.

Mitigation Measure #3.4-3a: Conduct a delineation of Waters of the U.S. and Wetlands and Obtain Permits.

In order to determine if there are wetlands or waters of the U.S. on a proposed project site which fall under USACE jurisdictional authority under Section 404 of the CWA, a delineation of the Waters of the U.S. and wetlands shall be performed and submitted to USACE for verification prior to annexation.

A Section 404 permit and a Section 401 Water Quality Certification or Waiver of Waste Discharge shall be acquired from USACE and the regional water quality control board (RWQCB) and a Section 1602 Streambed Alteration Agreement from CDFG respectively prior to the onset of construction related activities.

Mitigation Measure #3.4-3b:

Any jurisdictional waters that would be lost or disturbed due to implementation of any proposed project within the plan area shall be replaced or rehabilitated on a “no-net-loss” basis in accordance with the USACE’s and the RWQCB mitigation guidelines. Habitat restoration, rehabilitation, and/or replacement if required shall be at a location and by methods agreeable to USACE, RWQCB, and City of Merced. The project applicant shall abide by the conditions of any executed permits.

As described above, the University’s Construction Mitigation Plan, incidental take permits and requirements therein, and consultation with USFWS and CDFW would mitigate impacts to a less-than-significant level consistent with Mitigation Measures #3.4-1a through #3.4-1i in the GP PEIR. UC Merced has also committed to implementing mitigation measures for the protection of the crotch bumble bee (2020 LRDP MM BIO-4). 2020 LRDP MM BIO-9a commits UC Merced to avoid and minimize impacts on native birds protected under the Migratory Bird Treaty Act, including listed species, fully protected species, special-status species of concern, and raptors and passerines. Mitigation Measure LRDP MM BIO-9b requires that new buildings and structures incorporate bird-safe design practices. See Appendix A for the full text of the mitigation measures adopted for the 2020 LRDP. These measures exceed the commitments of the GP PEIR and would result in additional impact reduction. No additional mitigation is required.

3.6.4 Conclusion

There are no significant impacts that are peculiar to the project. No new impacts have occurred nor has any new information been found requiring new analysis or verification. The project would not have any potentially significant impacts or cumulative impacts on biological resources that were not discussed in the GP PEIR. Therefore, the conclusions of the GP PEIR remain valid, and approval of the project would not require additional environmental review.

3.7 CULTURAL RESOURCES

ENVIRONMENTAL ISSUES	Impact Examined in GP PEIR?	Could Annexation Result in a New or Substantially More Severe Impact?*	Are there Changes in Circumstance or New Information Available that Could Result in a Substantially More Severe Impact?	Do Mitigation Measures and/or Design Features Address/Resolve Impacts, Including Impacts That Would Otherwise be New or Substantially More Severe?
Would the project:				
a) Cause a substantial adverse change in the significance of a historical resource pursuant to Section 15064.5?	Impact #3.5-1: Cause a substantial adverse change in the significance of a historic or archaeological resource, pp. 3.5-9 to 3.5-12	No	No	N/A
b) Cause a substantial adverse change in the significance of an archaeological resource pursuant to Section 15064.5?	Impact #3.5-1: Cause a substantial adverse change in the significance of a historic or archaeological resource, pp. 3.5-9 to 3.5-12	No	No	Yes
c) Substantially disturb human remains, including those interred outside of formal cemeteries?	Impact #3.5-2: Potentially disturb human remains or destroy a unique paleontological resource, site, or geologic feature, pp. 3.5-10 to 3.5-12	No	No	Yes

*Determination does not factor implementation of previously adopted mitigation.

3.7.1 Environmental Setting

The GP PEIR describes the pre-history and Native American ethnography of the area, as well as use of the area in the historic period. Applicable Federal, State, and local regulations are also described. No substantial change in the environmental setting related to cultural resources, described in the GP PEIR Section 3.5, "Cultural Resources," has occurred since certification of the GP PEIR.

3.7.2 Discussion

a) Cause a substantial adverse change in the significance of a historical resource pursuant to Section 15064.5?

This topic is addressed in Section 3.7.2(b) below.

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

Pages 3.5-9 to 3.5-12 of the GP PEIR discuss the potential for General Plan implementation to cause a substantial adverse change in the significance of historic and archaeological resources (Impact #3.1-1). As stated in the GP PEIR, development in the planning area could result in earthmoving activities with potential to unearth previously undiscovered cultural resources. However, development that occurs with implementation of the General Plan would be consistent with policies to identify and preserve archaeological, historical, and other cultural resources (Policies SD 2.1, SD 2.2, and SD-2.3 of the Sustainable Development Element). The GP PEIR concludes that General Plan policies

would ensure that impacts on historical and archaeological resources would be less than significant; however, cumulatively considerable impacts on cultural resources from development in accordance with the General Plan would be significant and unavoidable (City of Merced 2010).

Annexation of UC Merced would not result in additional adverse changes in the significance of historical or archaeological resources. The GP PEIR evaluated the development and annexation of the UC Merced campus, as proposed in the 2009 LRDP. Therefore, impacts on historical and archaeological resources from development of the UC Merced campus in accordance with the 2009 LRDP are consistent with the impacts from implementation of the GP PEIR, described above.

The 2020 LRDP is the current planning document for development of the UC Merced campus. The 2020 LRDP SEIR does not evaluate impacts on cultural resources because the Initial Study determined that the revised LRDP would not result in a more severe or new impact on cultural resources beyond that identified for the 2009 LRDP. Specifically, no new archaeological resources or historic resources eligible for listing in the National Register of Historic Places (NRHP) and the California Register of Historical Resources (CRHR) were identified in the revised LRDP area (UC Merced 2018a). Furthermore, the mitigation adopted for the 2009 LRDP (MM CUL-2 and MM CUL-3) would apply to the new facilities proposed in the 2020 LRDP. This mitigation commits UC Merced to formally evaluate previously evaluated historic resources for NRHP and CRHR eligibility, and if eligible, develop and implement a Historic Properties Treatment Plan. In addition, this mitigation commits UC Merced and its contractors to follow specific protocols in the event that buried cultural resources are encountered during construction activities (UC Merced 2009).

Based on the above discussion, annexation of the UC Merced campus would not result in any new impacts or substantially increase the severity of impacts on historical and archaeological resources beyond those evaluated in the GP PEIR. Therefore, the findings of the GP PEIR regarding historical and archaeological resources remain valid and no new mitigation is required. This impact would remain less than significant but cumulatively significant and unavoidable.

c) Substantially disturb human remains, including those interred outside of formal cemeteries?

Pages 3.5-10 to 3.5-12 of the GP PEIR discuss the potential for General Plan implementation to disturb human remains (Impact #3.1-2). As stated in the GP PEIR, earthmoving activities during development in the planning area could result in the discovery of previously unidentified human remains. However, development would comply with Section 7050.5 of the California Health and Safety Code, which includes procedures to follow in the event that human remains are discovered during construction phases of development. In addition, development would be consistent with General Plan policies aimed to identify and preserve cultural resources, including human remains (Policies SD 2.1, SD 2.2, and SD-2.3 of the Sustainable Development Element). The GP PEIR concludes that General Plan policies would ensure that impacts on human remains would be less than significant; however, cumulatively considerable impacts on cultural resources from development in accordance with the General Plan would be significant and unavoidable (City of Merced 2010).

Annexation of UC Merced would not result in new disturbances to human remains. The GP PEIR evaluated the development and annexation of the UC Merced campus, as proposed in the 2009 LRDP. Therefore, impacts on human remains from development of the UC Merced campus in accordance with the 2009 LRDP are consistent with the impacts from implementation of the GP PEIR, described above.

The 2020 LRDP is the current planning document for development of the UC Merced campus. The 2020 LRDP SEIR does not evaluate impacts on cultural resources because the Initial Study determined that the revised LRDP would not result in a more severe or new impact on cultural resources beyond that identified for the 2009 LRDP (UC Merced 2018a). The mitigation adopted for the 2009 LRDP (MM CUL-3) would apply to the new facilities proposed in the 2020 LRDP, which commits UC Merced and its contractors to follow specific protocols in the event that human remains are encountered during construction activities (UC Merced 2009).

Based on the above discussion, annexation of the UC Merced campus would not result in any new impacts or substantially increase the severity of impacts related to the disturbance of human remains beyond those evaluated in

the GP PEIR. Therefore, the findings of the GP PEIR regarding the disturbance of human remains remain valid and no new mitigation is required. This impact would remain less than significant but cumulatively significant and unavoidable.

3.7.3 Mitigation Measures

No mitigation measures for cultural resources were proposed in the GP PEIR. The mitigation adopted for the 2009 LRDP (MM CUL-2 and MM CUL-3) would apply to the UC Merced campus. This mitigation commits UC Merced to formally evaluate previously evaluated historic resources for NRHP and CRHR eligibility, and if eligible, develop and implement a Historic Properties Treatment Plan. In addition, this mitigation commits UC Merced and its contractors to follow specific protocols in the event that buried cultural resources are encountered during construction activities. See Appendix B for the full text of the mitigation measures adopted for the 2009 LRDP. No new mitigation measures are required.

3.7.4 Conclusion

There are no significant impacts that are peculiar to the project. No new impacts have occurred nor has any new information been found requiring new analysis or verification. The project would not have any potentially significant impacts or cumulative impacts that were not discussed in the GP PEIR. Therefore, the conclusions of the GP PEIR remain valid and approval of the project would not require additional environmental review.

3.8 ENERGY

ENVIRONMENTAL ISSUES	Impact Examined in GP PEIR?	Could Annexation Result in a New or Substantially More Severe Impact?*	Are there Changes in Circumstance or New Information Available that Could Result in a Substantially More Severe Impact?	Do Mitigation Measures and/or Design Features Address/Resolve Impacts, Including Impacts That Would Otherwise be New or Substantially More Severe?
Would the project:				
a) Result in potentially significant environmental impact due to wasteful, inefficient, or unnecessary consumption of energy resources, during project construction or operation?	Not Analyzed	No	No	N/A
b) Conflict with or obstruct a state or local plan for renewable energy or energy efficiency?	Not Analyzed	No	No	N/A

*Determination does not factor implementation of previously adopted mitigation.

3.8.1 Environmental Setting

Since adoption of the GP PEIR, the State has increased the standards for building energy and vehicle fuel efficiency. The following plans and policies related to energy conservation are applicable to the project:

- ▶ Title 24 Energy Efficiency Standards: Title 24 includes energy efficiency standards for residential and nonresidential buildings to achieve energy efficiency in response to Assembly Bill (AB) 32, the Global Warming Solutions Act of 2006 and other State commitments.
- ▶ California Green Building Code (CALGreen): CALGreen identifies mandatory requirements for new residential and nonresidential buildings, which include requirements for construction site selection, stormwater control during construction, construction solid waste reduction, indoor water use reduction, building material selection, natural resource conservation, and site irrigation conservation.
- ▶ California Air Resources Board (CARB) Airborne Toxic Control Measures (ACTM): CARB has promulgated an ACTM that imposes idling limits for heavy-duty diesel motor vehicles. In addition to reducing air emissions, this ACTM would prevent the wasteful, inefficient, and unnecessary consumption of energy resources.
- ▶ University of California (UC) Sustainable Practices Policy: The UC Sustainable Practices Policy establishes the UC system's commitment to reducing its dependence on non-renewable energy sources.

3.8.2 Discussion

- a) Result in potentially significant environmental impact due to wasteful, inefficient, or unnecessary consumption of energy resources, during project construction or operation?

This topic is addressed in Section 3.8.2(b) below.

b) Conflict with or obstruct a state or local plan for renewable energy or energy efficiency?

The GP PEIR does not specifically evaluate the potential for implementation of the General Plan to result in the wasteful, inefficient, and unnecessary consumption of energy resources or conflict with state or local plans. As described in Section 5.2, "Significant Irreversible Changes," of the GP PEIR, buildout of the General Plan would result in consumption of fossil fuels. Increased energy would be required for construction; lighting, cooling, and heating of residences; and transportation of people. However, conserving non-renewable energy resources is identified as a plan objective that promotes sustainable growth. To that end, the General Plan includes policies intended to limit energy consumption (e.g., Policy T-1.5 Minimize unnecessary travel demand on major streets and promote energy conservation). General Plan policies and standards promoting energy conservation (Transportation and Circulation Policy T-1.5, Urban Development Policy UD-2.2, Open Space, Conservation, and Recreation Policy OS-5.1, and Sustainable Development Policies SD-3.1 and SD-3.2) reduce energy demand (City of Merced 2010). In addition, as discussed above, Mitigation Measure #3.3-2 requires that individual projects include as many energy-conserving features as possible.

The 2020 LRDP is the current planning document for development of the UC Merced campus. The 2020 LRDP SEIR evaluates the potential for implementation of the 2020 LRDP to increase the use of energy resources and conflict with plans for energy efficiency. Construction activities would be spread over a 10-year construction period and would represent a small percentage of the total energy used in the State. In addition, the proposed developments would include sustainable construction methods that comply with CALGreen and CARB's ATCMs. Therefore, construction-related energy use would not be inefficient or wasteful and would not conflict with energy efficiency plans; this impact would be less than significant and would not contribute substantially to a cumulative impact (UC Merced 2019).

Campus operation under the 2020 LRDP would require the consumption of natural gas and electricity. However, the proposed developments would be required to exceed Title 24 energy efficiency standards by 20 percent in compliance with UC Sustainable Practices Policy. UC Merced has set a goal of outperforming Title 24 energy efficiency standards by 30 percent and existing buildings on campus are currently using approximately 50 percent less energy than Title 24 standards. New buildings would be designed to minimize energy consumption and incorporate energy conservation measures, such as the use of passive solar design, energy-efficient appliances, solar hot water systems, and low-flow showerheads (UC Merced 2019).

Implementation of the 2020 LRDP would also require the consumption of petroleum fuel related to vehicle travel to and from the campus. UC Merced has committed to greenhouse gas (GHG) reduction measures that would reduce petroleum-based fuel use (LRDP MM GHG-1 and MM AQ-2). Furthermore, the total consumption of petroleum-based fuel is expected to decrease over time because State laws and regulations will continue to require further improvements in fuel efficiency in motor vehicles produced and/or sold in the State and push towards more zero emissions vehicles in the State vehicle mix. Therefore, operational energy use would not be inefficient or wasteful and would not conflict with energy efficiency plans; this impact would be less than significant and would not contribute substantially to a cumulative impact (UC Merced 2019).

Furthermore, because UC Merced is projected to grow at a slower pace than previously anticipated, development of the UC Merced campus in accordance with the 2020 LRDP is expected to consume less energy than the development proposed under the 2009 LRDP (UC Merced 2019). Based on the above discussion, annexation of the UC Merced campus would not result in any new significant impacts related to energy consumption and no mitigation is required.

3.8.3 Mitigation Measures

No mitigation measures for energy were proposed in the GP PEIR and no new mitigation measures are required.

3.8.4 Conclusion

There are no significant impacts that are peculiar to the project. No new impacts have occurred nor has any new information been found requiring new analysis or verification. The project would not have any potentially significant impacts or cumulative impacts that were not discussed in the GP PEIR. Therefore, the conclusions of the GP PEIR remain valid and approval of the project would not require additional environmental review.

3.9 GEOLOGY AND SOILS

ENVIRONMENTAL ISSUES	Impact Examined in GP PEIR?	Could Annexation Result in a New or Substantially More Severe Impact?*	Are there Changes in Circumstance or New Information Available that Could Result in a Substantially More Severe Impact?	Do Mitigation Measures and/or Design Features Address/Resolve Impacts, Including Impacts That Would Otherwise be New or Substantially More Severe?
Would the project:				
a) Directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury, or death involving:				
i) Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault? (Refer to California Geological Survey Special Publication 42.)	Impact #3.6-1: Expose people or structures to potential substantial adverse effects from seismic hazards, pp. 3.6-8 to 3.6-9	No	No	Yes
ii) Strong seismic ground shaking?				
iii) Seismic-related ground failure, including liquefaction?				
iv) Landslides?				
b) Result in substantial soil erosion or the loss of topsoil?	Impact #3.6-2: The proposed project would not result in substantial soil erosion or the loss of topsoil, pp. 3.6-9 and 3.6-10	No	No	N/A
c) 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?	Impact #3.6-3: The proposed project would not 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	No	No	Yes
d) Be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994, as updated), creating	Impact #3.6-4: The proposed project could be located on expansive soils creating substantial risks to life or property, pp. 3.6-10 and 3.6-11	No	No	Yes

ENVIRONMENTAL ISSUES	Impact Examined in GP PEIR?	Could Annexation Result in a New or Substantially More Severe Impact?*	Are there Changes in Circumstance or New Information Available that Could Result in a Substantially More Severe Impact?	Do Mitigation Measures and/or Design Features Address/Resolve Impacts, Including Impacts That Would Otherwise be New or Substantially More Severe?
substantial direct or indirect risks to life or property?				
e) Have soils incapable of adequately supporting the use of septic tanks or alternative waste water disposal systems where sewers are not available for the disposal of waste water?	Impact #3.6-5: Have soils incapable of adequately supporting the use of septic tanks or alternative waste water disposal systems where sewers are not available for the disposal of waste water, pp. 3.6-11	No	No	N/A
f) Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?	Impact #3.5-2: Potentially disturb human remains or destroy a unique paleontological resource, site, or geologic feature, pp. 3.5-10 to 3.5-12	No	No	N/A

*Determination does not factor implementation of previously adopted mitigation.

3.9.1 Environmental Setting

The GP PEIR describes faults, seismicity, and seismic hazards for the City and SUDP/SOI. Applicable Federal, State, and local regulations are also explained. No substantial change in the environmental setting related to geology and soils, described in the GP PEIR Section 3.6, "Geology and Soils," has occurred since certification of the GP PEIR. Soils and geologic conditions in the SUDP/SOI surrounding the UC Merced campus are consistent with the conditions described in the GP PEIR. No changes in pertinent regulations have occurred.

3.9.2 Discussion

- a) Directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury, or death involving:
 - i) Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault? (Refer to California Geological Survey Special Publication 42.)
 - ii) Strong seismic ground shaking?
 - iii) Seismic-related ground failure, including liquefaction?
 - iv) Landslides?

Pages 3.6-8 and 3.6-9 of the GP PEIR discuss the potential for General Plan implementation to expose people or structures to substantial adverse effects from seismic hazards (Impact #3.6-1). As stated in the GP PEIR, the planning

area is not within an Alquist-Priolo Earthquake Fault Zone; however, some areas may be subject to strong seismic ground shaking. Overall, soil liquefaction is considered to be a low to moderate hazard within the City. Individual development projects would be required to complete geotechnical engineering investigations to accurately evaluate site-specific seismic hazards and would be designed in conformance with the California Building Standards Code. In addition, several General Plan policies would reduce seismic-related hazards (S 2.1, S 2.2, and S 2.3 of the Safety Element). The GP PEIR concludes that impacts related to seismic hazards would be less than significant and would be less than cumulatively considerable (City of Merced 2010).

Annexation of UC Merced would not cause new adverse effects from seismic hazards. The GP PEIR evaluated the development and annexation of the UC Merced campus, as proposed in the 2009 LRDP. Therefore, impacts from seismic hazards associated with development of the UC Merced campus in accordance with the 2009 LRDP are consistent with the impacts from implementation of the GP PEIR, described above.

The 2020 LRDP is the current planning document for development of the UC Merced campus. The 2020 LRDP would be subject to the same seismic hazards and the same California Building Code regulations as those that applied to the 2009 LRDP (UC Merced 2018a). Furthermore, the mitigation proposed for the 2009 LRDP (MM GEO-2) would apply to the new facilities proposed in the 2020 LRDP. This mitigation commits UC Merced to prepare site-specific geotechnical evaluations and incorporate site-specific recommendations into the design of each new development (UC Merced 2009).

Based on the above discussion, annexation of the UC Merced campus would not result in any new impacts from seismic hazards. Therefore, the findings of the GP PEIR regarding seismic hazards remain valid and no new mitigation is required. This impact would remain less than significant.

b) Result in substantial soil erosion or the loss of topsoil?

Pages 3.6-9 and 3.6-10 of the GP PEIR discuss the potential for General Plan implementation to result in substantial soil and erosion or the loss of topsoil (Impact #3.6-2). As stated in the GP PEIR, the soil conditions and flat topography in the planning area result in low potential for erosion impacts. Development would be subject to erosion control and grading requirements, including compliance with National Pollutant Discharge Elimination System (NPDES) permits and implementation of storm water pollution prevention plans (SWPPPs) for project sites that disturb more than 1 acre. In addition, General Plan Policy OS-5.2 of the Open Space, Conservation, and Recreation Element requires the City to reduce soil erosion potential for new development. The GP PEIR concludes that impacts related to soil erosion and loss of topsoil would be less than significant and would be less than cumulatively considerable (City of Merced 2010).

Annexation of UC Merced would not increase soil erosion or loss of topsoil. The GP PEIR evaluated the development and annexation of the UC Merced campus, as proposed in the 2009 LRDP. Therefore, impacts on soil erosion and loss of topsoil from development of the UC Merced campus in accordance with the 2009 LRDP are consistent with the impacts from implementation of the GP PEIR, described above. The 2020 LRDP is the current planning document for development of the UC Merced campus. The 2020 LRDP would not result in a more severe or new impact on soil erosion and loss of topsoil beyond that identified for the 2009 LRDP. Specifically, implementation of the 2020 LRDP would be subject to the same erosion control requirements as that of the 2009 LRDP, including NPDES stormwater regulations for projects disturbing more than 1 acre (UC Merced 2018a).

Based on the above discussion, annexation of the UC Merced campus would not result in any new impacts related to soil erosion and loss of topsoil beyond those identified in the GP PEIR. Therefore, the findings of the GP PEIR regarding soil erosion and loss of topsoil remain valid and no new mitigation is required. This impact would remain less than significant.

c) 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?

Page 3.6-10 of the GP PEIR discusses the potential for General Plan implementation to be located on unstable geologic units or soils (Impact #3.6-3). As stated in the GP PEIR, there is low potential for landslides, soil liquefaction, lurch cracking, and lateral spreading in the flatter portions of the planning area. In addition, compliance with regulations, such as the Alquist-Priolo Act and California Building Standards Code, and implementation of General Plan policies (Policy OS-5.2 of the Open Space, Conservation, and Recreation Element and S-2.3 of the Safety Element) would address public health and safety issues resulting from unstable geologic units. The GP PEIR concludes that impacts related to unstable geologic units and soils would be less than significant and would be less than cumulatively considerable (City of Merced 2010).

Annexation of UC Merced would not exacerbate effects from soil instability. The GP PEIR evaluates the development and annexation of the UC Merced campus, as proposed in the 2009 LRDP. Therefore, impacts related to unstable geologic units and soils from development of the UC Merced campus in accordance with the 2009 LRDP are consistent with the impacts from implementation of the GP PEIR, described above. The revised LRDP would not result in a more severe or new impact from geologic units and soils beyond that identified for the 2009 LRDP. Specifically, the 2020 LRDP plan area is located on the same geologic units and soils and subject to the same California Building Code regulations as those that applied to the 2009 LRDP (UC Merced 2018a). Furthermore, the mitigation proposed for the 2009 LRDP (MM GEO-2), which requires preparation of a site-specific geotechnical evaluation and incorporation of site-specific recommendations into the design of each new development, would apply to the new facilities proposed in the 2020 LRDP (UC Merced 2009).

Based on the above discussion, annexation of the UC Merced campus would not result in any new impacts from unstable geologic units and soils beyond those identified in the GP PEIR. Therefore, the findings of the GP PEIR regarding unstable geologic units and soils remain valid and no new mitigation is required. This impact would remain less than significant.

d) Be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994, as updated), creating substantial direct or indirect risks to life or property?

Page 3.6-10 of the GP PEIR discusses the potential for General Plan implementation to result in projects located on expansive soils (Impact #3.6-4). As stated in the GP PEIR, the soils in the planning area are not generally considered to be expansive. In addition, compliance with regulations, such as the Alquist-Priolo Act and California Building Standards Code, and implementation of General Plan policies (Policy S-2.3 of the Safety Element) would address public health and safety issues resulting from expansive soils. The GP PEIR concludes that impacts related to expansive soils would be less than significant and would be less than cumulatively considerable (City of Merced 2010).

Annexation of UC Merced would not increase risks to life or property from expansive soils. The GP PEIR evaluates the development and annexation of the UC Merced campus, as proposed in the 2009 LRDP. Therefore, impacts related to expansive soils from development of the UC Merced campus in accordance with the 2009 LRDP are consistent with the impacts from implementation of the GP PEIR, described above. The 2020 LRDP would be exposed to the same risks from construction in areas with expansive soils as those that applied to the 2009 LRDP (UC Merced 2018a). Furthermore, the mitigation proposed for the 2009 LRDP (MM GEO-2), which requires preparation of a site-specific geotechnical evaluation and incorporation of site-specific recommendations into the design of each new development, would apply to the new facilities proposed in the 2020 LRDP (UC Merced 2009).

Based on the above discussion, annexation of the UC Merced campus would not result in any new impacts from expansive soils beyond those identified in the GP PEIR. Therefore, the findings of the GP PEIR regarding unstable expansive soils remain valid and no new mitigation is required. This impact would remain less than significant.

e) Have soils incapable of adequately supporting the use of septic tanks or alternative waste water disposal systems where sewers are not available for the disposal of waste water?

Page 3.6-11 of the GP PEIR discusses the potential for General Plan implementation to place development on soils incapable of adequately supporting septic tanks or alternative waste disposal systems (Impact #3.6-5). As stated in the GP PEIR, soils in the planning area are not generally considered to be expansive, have a generally low to moderate erosion potential, and are generally considered suitable for wastewater disposal using conventional septic systems. The GP PEIR concludes that this impact would be less than significant and would be less than cumulatively considerable (City of Merced 2010).

The 2020 LRDP is the current planning document for development of the UC Merced campus. The 2020 LRDP SEIR does not evaluate impacts from soils incapable of adequately supporting septic tanks or alternative waste disposal systems because these wastewater disposal methods are not proposed under the 2020 LRDP and no impacts would occur (UC Merced 2019).

Based on the above discussion, annexation of the UC Merced campus would not result in any new impacts from soils incapable of adequately supporting septic tanks or alternative waste disposal systems beyond those evaluated in the GP PEIR. Therefore, the findings of the GP PEIR regarding this topic remain valid and no new mitigation is required. This impact would remain less than significant.

f) Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?

Pages 3.5-10 to 3.5-12 of the GP PEIR discuss the potential for General Plan implementation to destroy a unique paleontological resource or site or unique geologic feature (Impact #3.1-2). As stated in the GP PEIR, earthmoving activities during development in the planning area could result in impacts on paleontological resources or geologic features. However, development would be consistent with General Plan Policy SD-2.2 of the Sustainable Development Element, which aims to identify and preserve cultural resources. The GP PEIR concludes that this General Plan policy would ensure that impacts on paleontological resources and geologic features would be less than significant; however, cumulatively considerable impacts on paleontological resources and geologic features from development in accordance with the General Plan would be significant and unavoidable (City of Merced 2010).

Annexation of UC Merced would not result in additional destruction of paleontological resources or sites or unique geologic features. The GP PEIR evaluates the development and annexation of the UC Merced campus, as proposed in the 2009 LRDP. Therefore, impacts on paleontological resources and geologic features from development of the UC Merced campus in accordance with the 2009 LRDP are consistent with the impacts from implementation of the GP PEIR, described above. The 2020 LRDP would not result in a more severe or new impact on cultural resources beyond that identified for the 2009 LRDP. Specifically, the paleontological sensitivity of the 2020 LRDP planning area is the same as that of the 2009 LRDP (UC Merced 2018a). Furthermore, the mitigation adopted for the 2009 LRDP (MM CUL-4) would apply to the new facilities proposed in the 2020 LRDP. This measure commits UC Merced and its contractors to follow specific protocols in the event that paleontological resources are encountered during construction activities, and commits UC Merced to retain a paleontological monitor in areas of high paleontological sensitivity (UC Merced 2009).

Based on the above discussion, annexation of the UC Merced campus would not result in any new impacts or substantially increase the severity of impacts on paleontological resources and geologic features beyond those identified for the 2009 LRDP, as evaluated in the GP PEIR. Therefore, the findings of the GP PEIR regarding paleontological resources and geologic features remain valid and no new mitigation is required. This impact would remain less than significant but cumulatively significant and unavoidable.

3.9.3 Mitigation Measures

No mitigation measures for geology and soils were proposed in the GP PEIR. UC Merced has committed to the mitigation proposed for the 2009 LRDP (MM GEO-2 and MM CUL-4) for development on the UC Merced campus. This mitigation commits UC Merced to prepare site-specific geotechnical evaluations and incorporate site-specific recommendations into the design of each new development. It also commits UC Merced and its contractors to follow specific protocols if paleontological resources are encountered during construction activities and commits UC Merced to retain a paleontological monitor in areas of high paleontological sensitivity (UC Merced 2009). See Appendix B for the full text of the mitigation measures adopted for the 2009LRDP. No new mitigation measures are required.

3.9.4 Conclusion

There are no significant impacts that are peculiar to the project. No new impacts have occurred nor has any new information been found requiring new analysis or verification. The project would not have any potentially significant impacts or cumulative impacts that were not discussed in the GP PEIR. Therefore, the conclusions of the GP PEIR remain valid and approval of the project would not require additional environmental review.

3.10 GREENHOUSE GAS EMISSIONS

ENVIRONMENTAL ISSUES	Impact Examined in GP PEIR?	Could Annexation Result in a New or Substantially More Severe Impact?*	Are there Changes in Circumstance or New Information Available that Could Result in a Substantially More Severe Impact?	Do Mitigation Measures and/or Design Features Address/ Resolve Impacts, Including Impacts That Would Otherwise be New or Substantially More Severe?
Would the project:				
a) Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment?	Impact #3.17-1: Development of the Project could potentially result in a cumulatively considerable incremental contribution to the significant cumulative impact of global climate change, pp. 3.17-15 and 3.17-16	No	No	N/A
b) Conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of greenhouse gases?	Impact #3.17-2: Conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of greenhouse gases, pp. 3.17-16 and 3.17-17	No	No	Yes

*Determination does not factor implementation of previously adopted mitigation.

3.10.1 Environmental Setting

The GP PEIR describes existing GHGs and links to global climate change, as well as feedback mechanisms and uncertainty related to how specific changes could affect global climate change. Applicable Federal, State, and local regulations are also explained. Since adoption of the GP PEIR, additional laws and regulations have been passed that set forth more stringent GHG reduction targets, including Senate Bill (SB) 32 of 2016, which reduces the statewide GHG emissions targets established under AB 32 of 2006 to 40 percent below 1990 levels by 2030.

The UC and UC Merced have adopted policies and plans to reduce GHG emissions, which include the following:

- ▶ UC Sustainability Policy: This policy reflects UC Merced's commitment to demonstrate sustainable practices through green building design; clean energy; climate protection; sustainable transportation; sustainable building operations; zero waste; and sustainable procurement, foodservices, water systems, and health centers (University of California 2020).
- ▶ UC Merced Sustainability Strategic Plan: This plan outlines UC Merced's sustainability goals for academics, research, engagement, and operations, which include achieving zero net GHG emissions by 2020 (UC Merced 2017).
- ▶ UC Merced Climate Action Plan: This plan represents UC Merced's vision for climate sustainability and summarizes goals, progress, and actions related to reducing GHG emissions. The primary goals for the plan include achieving a net zero energy campus and a climate neutral University by 2020. The plan was developed to meet UC Sustainability Policy requirements (UC Merced 2018b).

3.10.2 Discussion

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

Pages 3.17-15 to 3.17-16 of the GP PEIR discuss the potential for General Plan implementation to contribute to global climate change from emissions of GHGs (Impact #3.17-1). As stated in the GP PEIR, implementation of the General Plan would result in GHG emissions from stationary sources, such as commercial buildings and residential homes (e.g., use of natural gas and operation of landscape maintenance equipment), and from vehicle emissions associated with new development. Implementation of the General Plan would comply with existing plans and policies that address global climate change. In addition, Mitigation Measures #3.3-1a and #3.3-2 (refer to Section 3.5.3, "Air Quality") would minimize air pollutants, including emissions of GHGs, from new development. Despite these measures, implementation of the General Plan would result in a significant, cumulatively considerable, and unavoidable impact from the generation of GHG emissions.

The GP PEIR evaluates the development and annexation of the UC Merced campus, as proposed in the 2009 LRDP. Therefore, impacts related to GHG emissions from development of the UC Merced campus in accordance with the 2009 LRDP are consistent with the impacts from implementation of the GP PEIR, described above. The 2020 LRDP SEIR evaluated the potential for development of the UC Merced campus in accordance with the 2020 LRDP to change the potential for the campus to generate GHG emissions. A revised GHG impact assessment was prepared to comply with more stringent GHG reduction targets set forth by AB 32. Based on AB 32 and SB 32 targets, UC Merced used the following targets as thresholds of significance: (a) 2030 Total Emissions Target of 3,300 metric tons of carbon dioxide equivalent per year (MTCO₂e/year) and (b) 2030 Per Capita Emissions Target of 2.44 MTCO₂e/service person/year. Based on modeling for the 2020 LRDP, the campus per capita emissions in 2030 were below UC Merced's 2030 Per Capita Target, but total campus emissions were found to exceed UC Merced's 2030 Total Emissions Target. UC Merced has committed to implementing measures (LRDP MM GHG-1 and MM AQ-2), which include implementing project-specific and campus-wide greenhouse reduction measures and purchasing GHG offsets, if necessary, to reduce GHG emissions to less than significant levels (UC Merced 2019).

Based on the above discussion, annexation of the UC Merced campus would not substantially increase the severity of impacts related to GHG emissions evaluated in the GP PEIR. Therefore, the findings of the GP PEIR regarding GHG emissions remain valid and no new mitigation is required. This impact would remain significant and unavoidable.

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

Pages 3.17-16 to 3.17-17 of the GP PEIR discuss the potential for General Plan implementation to conflict with plans, policies, and regulations adopted for the purpose of reducing GHG emissions (Impact #3.17-2). As stated in the GP PEIR, the General Plan policies were designed to reduce GHG emissions to the extent practicable in accordance with applicable federal, State, and local plans, policies, and regulations. Therefore, the GP PEIR concludes that impacts related to conflicts with applicable plans, policies, and regulations for reducing GHG emissions would be less than significant.

The 2020 LRDP is the current planning document for development of the UC Merced campus. The 2020 LRDP SEIR evaluates the potential for development of the UC Merced campus in accordance with the 2020 LRDP to conflict with applicable plans, policies, and regulations for reducing GHG emissions. As described in Section 3.10.2(a) above, the per capita campus emissions were found to meet UC Merced's 2030 Per Capita Emissions Target and the total campus emissions would meet UC Merced's 2030 Total Emission Target with implementation of mitigation measures MM GHG-1 and MM AQ-2. In addition, campus development under the 2020 LRDP would continue to be completed in compliance with the UC Sustainability Policy, UC Merced Sustainability Strategic Plan, and UC Merced Climate Action Plan (UC Merced 2019).

Based on the above discussion, annexation of the UC Merced campus would not result in any new impacts related to conflicts with applicable plans, policies, and regulations for reducing GHG emissions evaluated in the GP PEIR.

Therefore, the findings of the GP PEIR regarding GHG emissions remain valid and no new mitigation is required. This impact would remain less than significant.

3.10.1 Mitigation Measures

No mitigation measures for GHG emissions were proposed in the GP PEIR. UC Merced has committed to implementing project-specific and campus-wide greenhouse reduction measures and purchasing GHG offsets, if necessary, to reduce GHG emissions from development and operation of the UC Merced campus (LRDP MM GHG-1 and MM AQ-2). See Appendix A for the full text of the mitigation measures adopted for the 2020 LRDP. No new mitigation measures are required.

3.10.2 Conclusion

There are no significant impacts that are peculiar to the project. No new impacts have occurred nor has any new information been found requiring new analysis or verification. The project would not have any potentially significant impacts or cumulative impacts that were not discussed in the GP PEIR. Therefore, the conclusions of the GP PEIR remain valid and approval of the project would not require additional environmental review.

3.11 HAZARDS AND HAZARDOUS MATERIALS

ENVIRONMENTAL ISSUES	Impact Examined in GP PEIR?	Could Annexation Result in a New or Substantially More Severe Impact?*	Are there Changes in Circumstance or New Information Available that Could Result in a Substantially More Severe Impact?	Do Mitigation Measures and/or Design Features Address/ Resolve Impacts, Including Impacts That Would Otherwise be New or Substantially More Severe?
Would the project:				
a) Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?	Impact #3.7-1: Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials, pp. 3.7-8 to 3.7-9	No	No	N/A
b) Create a significant hazard to the public or the environment through reasonably foreseeable upset and/or accident conditions involving the release of hazardous materials into the environment?	Impact #3.7-2: Create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment, pp. 3.7-9 to 3.7-10	No	No	N/A
c) Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?	Impact #3.7-3: Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school, pp. 3.7-10 and 3.7-11	No	No	N/A
d) Be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, would it create a significant hazard to the public or the environment?	Impact #3.7-4: Would the proposed project be located on a site, or proximate to a site, that is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, create a significant hazard to the public or the environment, p. 3.7-11	No	No	Yes
e) For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project result in a safety hazard or excessive noise for people residing or working in the project area?	Impact #3.7-5: Would the proposed project be located within an airport land use plan, or within two miles of a public airport or private airstrip, creating a safety hazard for people residing or working in the project area, pp. 3.7-11 to 3.7-12	No	No	N/A

ENVIRONMENTAL ISSUES	Impact Examined in GP PEIR?	Could Annexation Result in a New or Substantially More Severe Impact?*	Are there Changes in Circumstance or New Information Available that Could Result in a Substantially More Severe Impact?	Do Mitigation Measures and/or Design Features Address/ Resolve Impacts, Including Impacts That Would Otherwise be New or Substantially More Severe?
f) Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?	Impact #3.7-6: Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan, p. 3.7-13	No	No	N/A
g) Expose people or structures, either directly or indirectly, to a significant risk of loss, injury, or death involving wildland fires?	Impact #3.7-7: Expose people or structures to a significant risk of loss, injury or death involving wildland fires, including where wildlands are adjacent to urbanized areas or where residence are intermixed with wildlands, pp. 3.7-13 and 3.7-14	No	No	N/A

*Determination does not factor implementation of previously adopted mitigation.

3.11.1 Environmental Setting

The GP PEIR describes wildland and urban fires hazards, airport safety, hazards associated with railroads, and emergency preparedness. Applicable Federal, State, and local regulations are also explained. No substantial change in the environmental setting related to hazards and hazardous materials, described in the GP PEIR Section 3.7, "Hazards and Hazardous Materials," has occurred since certification of the GP PEIR. The existing hazards and response mechanisms are generally consistent with those described in the GP PEIR. No substantial changes in pertinent regulations have occurred.

3.11.2 Discussion

a) Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?

Pages 3.7-8 and 3.7-9 of the GP PEIR discuss the potential for General Plan implementation to create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials (Impact #3.7-1). As stated in the GP PEIR, new development in the planning area could increase hazardous materials used, stored, transported, and disposed of in the planning area. These activities are regulated by federal, State, and County agencies. General Plan policies (T-1.4 of the Transportation and Circulation Element and S-7.1 and S-7.2 of the Safety Element) would include actions to improve roadway safety, prevent releases of hazardous materials, require that hazardous sites are properly remediated, and ensure that hazardous materials are properly used and stored. The GP PEIR concludes that impacts related to the routine transport, use, or disposal of hazardous materials would be less than significant and would be less than cumulatively considerable (City of Merced 2010).

Annexation of UC Merced would not create new hazards from the routine transport, use, or disposal of hazardous materials. The GP PEIR evaluates the development and annexation of the UC Merced campus, as proposed in the 2009 LRDP. Therefore, impacts on the routine transport, use, or disposal of hazardous materials associated with development of the UC Merced campus in accordance with the 2009 LRDP are consistent with the impacts from

implementation of the GP PEIR, described above. The 2020 LRDP would not result in a more severe or new impact on this topic beyond that identified for the 2009 LRDP. Specifically, the 2020 LRDP would be subject to the same regulations pertaining to hazardous materials as those that applied to the 2009 LRDP, which include the following: U.S. Department of Health and Human Services guidelines for classifying biohazardous agents; U.S. Department of Transportation (U.S. DOT), California Department of Transportation, and U.S. Postal Service regulations for packaging and transporting hazardous materials; UC Merced Environmental Health and Safety procedures for handling hazardous materials; federal and state animal safety protocols and waste management practices; and California Occupational Health and Safety requirements for laboratory settings. In addition, construction activities would comply with applicable regulations and codes, including Titles 8 and 22 of the Code of California Regulations, Uniform Fire Code, and Division 20 of the California Health and Safety Code (UC Merced 2018a).

Based on the above discussion, annexation of the UC Merced campus would not result in any new impacts from the routine transport, use, or disposal of hazardous materials beyond those identified in the GP PEIR. Therefore, the findings of the GP PEIR regarding the routine transport, use, or disposal of hazardous materials remain valid and no new mitigation is required. This impact would remain less than significant.

b) Create a significant hazard to the public or the environment through reasonably foreseeable upset and/or accident conditions involving the release of hazardous materials into the environment?

Pages 3.7-9 and 3.7-10 of the GP PEIR discuss the potential for General Plan implementation to create a significant hazard to the public from reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment (Impact #3.7-2). As stated in the GP PEIR, the threat of accidents would be maintained at a less than significant level through compliance with existing federal, State, County, and local regulations, which include the following: US. DOT regulations for the transport of hazardous materials, California Environmental Protection Agency oversight of federal laws and regulations, and the City's Emergency Plan. General Plan policies (S-7.1 and S-7.2 of the Safety Element) include requirements for the City to prevent injuries and environmental contamination from the accidental release of hazardous materials, enforce the Merced County Hazardous Waste Management Plan, and enforce the permitted use and storage of hazardous materials. The GP PEIR concludes that impacts related accidental release of hazardous materials would be less than significant and would be less than cumulatively considerable (City of Merced 2010).

The GP PEIR evaluates the development and annexation of the UC Merced campus, as proposed in the 2009 LRDP. Therefore, impacts from the accidental release of hazardous materials associated with development of the UC Merced campus in accordance with the 2009 LRDP are consistent with the impacts from implementation of the GP PEIR, described above. Implementation of the 2020 LRDP would involve transportation of similar amounts of hazardous materials as was anticipated in the 2009 LRDP. In addition, the 2020 LRDP would be subject to the same regulations as those that applied to the 2009 LRDP, which include U.S. DOT and U.S. Postal Service regulations for packaging and transporting hazardous materials that minimize the potential for accidental spills (UC Merced 2018a).

Based on the above discussion, annexation of the UC Merced campus would not result in any new impacts from the accidental release of hazardous materials beyond those evaluated in the GP PEIR. Therefore, the findings of the GP PEIR regarding the accidental release of hazardous materials remain valid and no new mitigation is required. This impact would remain less than significant.

c) Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?

Pages 3.7-10 and 3.7-11 of the GP PEIR discuss the potential for General Plan implementation to emit or handle hazardous materials within 0.25 mile of an existing or proposed school (Impact #3.7-3). As stated in the GP PEIR, implementation of the General Plan is anticipated to increase the number of school-age children and, thus, the need for constructing additional school facilities. General Plan policies would ensure that schools are sited in a manner that minimizes exposure to hazardous conditions and developed in compliance with the California Education Code and California Code of Regulations (Policy P-7.1 of the Public Services and Facilities Element). In addition, General Plan

Policies S-7.1 and S-7.2 of the Safety Element include requirements to prevent injuries and environmental contamination from the accidental release of hazardous materials and to remediate hazardous materials sites prior to their development. Therefore, the GP PEIR concluded that impacts would be less than significant, and no cumulative impacts were identified (City of Merced 2010).

Annexation of UC Merced would not generate new emissions within 0.25 mile of existing or proposed schools. There are no existing schools within 0.25 mile of the 2020 LRDP planning area (UC Merced 2018a).

Based on the above discussion, annexation of the UC Merced campus would not result in any new impacts from emitting or handling hazardous materials near schools. Therefore, the findings of the GP PEIR regarding emitting or handling hazardous materials near schools remain valid and no new mitigation is required. This impact would remain less than significant.

d) Be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code §65962.5 and, as a result, would it create a significant hazard to the public or the environment?

Page 3.7-11 of the GP PEIR discusses the potential for General Plan implementation to be located on a hazardous materials site and thereby create a significant hazard to the public or the environment (Impact #3.7-4). The GP PEIR identifies several hazardous materials sites in the planning area. However, future development in the planning area would comply with regulations established by the State Department of Health Services, the Merced County Hazardous Waste Management Plan, and applicable General Plan policies discussed in the responses above. Therefore, the GP PEIR concluded that impacts from hazardous materials sites would be less than significant, and no cumulative impacts were identified (City of Merced 2010).

Annexation of UC Merced would not create new hazards from hazardous materials sites. Although unknown hazardous materials sites could be identified in areas planned for campus development, the mitigation adopted for the 2009 LRDP (MM HAZ-4) would apply to the new facilities proposed in the 2020 LRDP. This mitigation commits UC Merced to remediate or remove any contamination that is identified during construction on the campus (UC Merced 2009).

Based on the above discussion, annexation of the UC Merced campus would not result in any new impacts from hazardous materials sites. Therefore, the findings of the GP PEIR regarding hazardous materials sites remain valid and no new mitigation is required. This impact would remain less than significant.

e) For a project located within an airport land use plan or, where such a plan has not been adopted, within 2 miles of a public airport or public use airport, would the project result in a safety hazard or excessive noise for people residing or working in the project area?

Pages 3.7-11 and 3.7-12 of the GP PEIR discuss the potential for General Plan implementation to result in excessive airport noise or safety hazards (Impact #3.7-2). The GP PEIR identifies two airports in the planning area, which include the Merced Regional Airport and Castle Airport. Future development would be subject to the requirements of the Merced County Airport Land Use Compatibility Plan. Furthermore, General Plan policies would ensure that incompatible development is not approved in areas where airport impacts could occur (Policy UE-1.1 of the Urban Expansion Element, Policy S-5.1 of the Safety Element, Policy OS-4.1 of the Open Space Element, and Policy T-3.1 of the Transportation Element). Therefore, the GP PEIR concluded that impacts would be less than significant, and no cumulative impacts were identified (City of Merced 2010).

Annexation of UC Merced would not create new airport safety hazards or noise. The UC Merced campus is not within an airport land use plan or within 2 miles of a public airport (UC Merced 2018a).

Based on the above discussion, annexation of the UC Merced campus would not result in any new impacts from excessive airport noise and safety hazards. Therefore, the findings of the GP PEIR regarding excessive airport noise and safety hazards remain valid and no new mitigation is required. This impact would remain less than significant.

f) Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?

Page 3.7-13 of the GP PEIR discusses the potential for General Plan implementation to interfere with an adopted emergency response or evacuation plans (Impact #3.7-6). As stated in the GP PEIR, new development and population growth could affect emergency response and evacuation during disasters. General Plan Policy S-1.1 of the Safety Element would support emergency preparedness, the funding of emergency service needs in conjunction with urban growth, and the planning of future emergency routes. The GP PEIR concludes that impacts related to impairment of emergency response and evacuation plans would be less than significant and would be less than cumulatively considerable (City of Merced 2010).

Annexation of UC Merced would not result in interference with existing emergency response and evacuation plans. The GP PEIR evaluated the development and annexation of the UC Merced campus, as proposed in the 2009 LRDP. Therefore, impacts on emergency response and evacuation plans associated with development of the UC Merced campus in accordance with the 2009 LRDP are consistent with the impacts from implementation of the GP PEIR, described above. The 2020 LRDP would be subject to the same emergency response and evacuation plans and procedures as those that applied to the 2009 LRDP, including the UC Merced Emergency Operations Plan and Crisis Communications Plan. Furthermore, safety planning documents would continue to be prepared and updated in accordance with applicable regulations, including California Health and Safety Code Section 25517.5 (UC Merced 2018a).

Based on the above discussion, annexation of the UC Merced campus would not result in any new impacts on emergency response and evacuation plans beyond those evaluated in the GP PEIR. Therefore, the findings of the GP PEIR regarding emergency response and evacuation plans remain valid and no new mitigation is required. This impact would remain less than significant.

g) Expose people or structures, either directly or indirectly, to a significant risk of loss, injury, or death involving wildland fires?

Pages 3.7-13 and 3.7-14 of the GP PEIR discuss the potential for General Plan implementation to expose people or structures to risks involving wildland fires (Impact #3.7-7). The GP PEIR identified minimal wildland fire risks in the planning area. General Plan policies would ensure that the City is able to provide adequate fire protection services for the community, provide adequate accessibility and infrastructure support for emergency service providers, and reduce fire hazards through fire prevention and management practices (Policy S-4.1 and S-4.2 of the Safety Element and Policy OS-4.1 of the Open Space Element). The GP PEIR concludes that impacts related to wildland fires would be less than significant and would be less than cumulatively considerable (City of Merced 2010).

Annexation of UC Merced would not expose more people or structures to wildland fires. The GP PEIR evaluates the development and annexation of the UC Merced campus, as proposed in the 2009 LRDP. Therefore, impacts from wildland fires associated with development of the UC Merced campus in accordance with the 2009 LRDP are consistent with the impacts from implementation of the GP PEIR, described above.

The area proposed for annexation would be subject to the same fire risk as the 2009 LRDP planning area evaluated in the GP PEIR. In addition, the 2020 LRDP would be subject to the standards and management practices for fire protection and prevention as those that applied to the 2009 LRDP. These standards include building code standards for fire equipment access, minimum water supply reserves, and fuel breaks. Furthermore, UC Merced would continue to adhere to fuel management practices in open space and landscaped areas (UC Merced 2018a).

Based on the above discussion, annexation of the UC Merced campus would not result in any new impacts from wildland fires beyond those evaluated in the GP PEIR. Therefore, the findings of the GP PEIR regarding wildland fires remain valid and no new mitigation is required. This impact would remain less than significant.

3.11.3 Mitigation Measures

No mitigation measures for hazards and hazardous materials were proposed in the GP PEIR. The mitigation adopted for the 2009 LRDP (MM HAZ-4) commits UC Merced to remediate or remove any contamination that is identified during construction on the campus. See Appendix B for the full text of the mitigation measures adopted for the 2009 LRDP. No new mitigation measures are required.

3.11.4 Conclusion

There are no significant impacts that are peculiar to the project. No new impacts have occurred nor has any new information been found requiring new analysis or verification. The project would not have any potentially significant impacts or cumulative impacts that were not discussed in the GP PEIR. Therefore, the conclusions of the GP PEIR remain valid and approval of the project would not require additional environmental review.

3.12 HYDROLOGY AND WATER QUALITY

ENVIRONMENTAL ISSUES	Impact Examined in GP PEIR?	Could Annexation Result in a New or Substantially More Severe Impact?*	Are there Changes in Circumstance or New Information Available that Could Result in a Substantially More Severe Impact?	Do Mitigation Measures and/or Design Features Address/Resolve Impacts, Including Impacts That Would Otherwise be New or Substantially More Severe?
Would the project:				
a) Violate any water quality standards or waste discharge requirements or otherwise substantially degrade surface or groundwater quality?	Impact #3.8-1: Violation of water quality standards or waste discharge requirements or otherwise substantially degrade water quality, pp. 3.8-14 and 3.8-15	No	No	N/A
b) Substantially decrease groundwater supplies or interfere substantially with groundwater recharge such that the project may impede sustainable groundwater management of the basin?	Impact #3.8-2: The proposed project could substantially deplete groundwater supplies or interfere substantially with groundwater recharge such that there would be a net deficit in aquifer volume or a lowering of the local groundwater table, pp. 3.8-15 and 3.8-16	No	No	N/A
c) Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river or through the addition of impervious surfaces, in a manner which would:				
i) Result in substantial on- or offsite erosion or siltation;	Impact #3.8-3: The proposed project could substantially alter the existing drainage pattern of the 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 or substantially increase the rate or amount of surface runoff in a manner, which would result in on- or offsite flooding, pp. 3.8-16 and 3.8-17	No	No	N/A

ENVIRONMENTAL ISSUES	Impact Examined in GP PEIR?	Could Annexation Result in a New or Substantially More Severe Impact?*	Are there Changes in Circumstance or New Information Available that Could Result in a Substantially More Severe Impact?	Do Mitigation Measures and/or Design Features Address/Resolve Impacts, Including Impacts That Would Otherwise be New or Substantially More Severe?
ii) Substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or offsite;	Refer to Impact #3.8-3 above	No	No	N/A
iii) Create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff; or	Impact #3.8-4: The proposed project could create or contribute runoff water which would exceed the capacity of existing stormwater drainage systems or provide substantial additional sources of polluted runoff, pp. 3.8-17 and 3.8-18	No	No	N/A
iv) Impede or redirect flood flows?	Impact #3.8-5: The proposed project could place housing or other structures within a 100-year flood hazard area as mapped on a federal Flood Hazard Boundary, Flood Insurance Rate Map, or other flood hazard delineation map or place within a 100-year flood hazard area structures which could impede or redirect flood flows, pp. 3.8-18 and 3.8-19	No	No	N/A
d) In flood hazard, tsunami, or seiche zones, risk release of pollutants due to project inundation?	Not Analyzed	No	No	N/A
e) Conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan?	Not Analyzed	No	No	N/A

*Determination does not factor implementation of previously adopted mitigation.

3.12.1 Environmental Setting

The GP PEIR describes the climate, regional topography, the San Joaquin/Merced River drainage basin, groundwater conditions, and water quality for the City and SUDP/SOI. No substantial change in the environmental setting related to hydrology and water quality, described in the GP PEIR Section 3.8, "Hydrology and Water Quality," has occurred. Since certification of the GP PEIR, new legislation was passed to protect groundwater resources in the State. Under the Sustainable Groundwater Management Act (SGMA), passed in 2014, the Department of Water Resources

identified 94 basins and subbasins throughout the State as medium and high priority, of which 21 were identified as critically overdrafted. As defined by SGMA, critical overdraft occurs when "continuation of present water management practices would probably result in significant adverse overdraft-related environmental, social, or economic impacts." SGMA requires local agencies in high- and medium-priority basins to form groundwater sustainability agencies (GSA). GSAs are responsible for developing and implementing groundwater sustainability plans (GSPs). GSPs serve as a roadmap for (1) how to achieve long-term groundwater sustainability, (2) how to manage groundwater, and (3) how to avoid undesirable effects from groundwater overdraft, such as reduced groundwater levels and storage, land subsidence, depletion of surface water, and degradation of groundwater quality (Merced SGMA 2018).

The Merced Groundwater Basin underlies the project area. Upon passage of SGMA, the Merced Groundwater Basin was formally designated as a critically overdrafted and a high-priority basin. In 2017, three GSAs were formed within the Merced Subbasin: Merced Subbasin GSA, Merced Irrigation-Urban GSA, and Turner Island Water District GSA. These three GSAs, collectively referred to as the Merced SGMA, adopted the Merced Subbasin GSP in December 2019. The Merced Subbasin GSP identifies 12 priority projects and management actions to either (1) increase surface water supplies to augment the sustainable groundwater yield, or (2) increase groundwater recharge, and thereby increase the amount of groundwater that can be sustainably used (Merced SGMA 2019). Now that the GSP has been adopted, the GSAs are moving into the GSP implementation phase.

In 2017, UC Merced prepared the *UC Merced Campus Water Action Plan*, which is a strategic planning document intended to identify water systems or processes that maximize campus water use conservation and efficiency, optimize water resource management, protect resources in the context of the local watershed, enhance economic, social, and environmental sustainability while meeting operational objectives, comply with the UC system wide 2016 Sustainable Practices Policy on Sustainable Water Systems, and supports UC Merced's Sustainability Strategic Plan. The Water Action Plan includes both targets and actions to reduce consumptive use of water, and targets and actions to manage stormwater and protect the watershed.

The City of Merced's 2020 Urban Water Master Plan (UWMP) was adopted in August of 2021. In 2020, the City supplied 20,076 acre-feet (AF) of potable water and 4,050 AF of recycled water. Potable water demands are projected to increase to 31,825 AF by 2040 due to increases in the City and UC Merced population. The City's water supply is projected to sufficiently meet expected demands through 2040 through the installation of additional groundwater wells and construction of a 10 million gallon per day (mgd) surface water treatment plant. The surface water treatment plant is projected to use surface water supplied by Merced Irrigation District and begin operation by 2030 (City of Merced 2021).

3.12.2 Discussion

a) **Violate any water quality standards or waste discharge requirements or otherwise substantially degrade surface or groundwater quality?**

Pages 3.8-14 and 3.8-15 of the GP PEIR discuss the potential for General Plan implementation to violate water quality standards or waste discharge requirements or otherwise substantially degrade water quality (Impact #3.8-1). As stated in the GP PEIR, construction activities and new development in the planning area could increase pollutants entering receiving waters and potentially impact water quality. General Plan Policies P-5.1 and P-5.2 of the Public Services and Facilities Element would ensure that the City provides new storm drainage facilities for future development and continues to implement and update the Merced Storm Water Master Plan and Storm Water Management Plan for the planning area. New development would be required to comply with these plans. In addition, General Plan Policy OS-5.1 of the Open Space Element would ensure that the City takes measures to preserve and enhance water quality, including utilizing Best Management Practices (BMP), monitoring groundwater contamination sources, and promoting the use of drought tolerant landscaping. The GP PEIR concludes that impacts related to water quality standards and degradation would be less than significant and would be less than cumulatively considerable (City of Merced 2010).

Annexation of UC Merced would not result in new violations of water quality standards or waste discharge requirements or additional degradation to water quality. The GP PEIR evaluates the development and annexation of the UC Merced campus, as proposed in the 2009 LRDP. Therefore, impacts related to water quality standards and degradation associated with development of the UC Merced campus in accordance with the 2009 LRDP are consistent with the impacts from implementation of the GP PEIR, described above. The 2020 LRDP would not result in a more severe or new impact. Specifically, all development would be subject to regulations pertaining to water quality, including NPDES stormwater regulations for construction projects disturbing more than 1 acre. In compliance with NPDES regulations, a project-specific SWPPP would be prepared and implemented to reduce water quality impacts (UC Merced 2018a).

Based on the above discussion, annexation of the UC Merced campus would not result in any new impacts on water quality standards and degradation beyond those identified in the GP PEIR. Therefore, the findings of the GP PEIR regarding water quality standards and degradation remain valid and no new mitigation is required. This impact would remain less than significant.

b) Substantially decrease groundwater supplies or interfere substantially with groundwater recharge such that the project may impede sustainable groundwater management of the basin?

Pages 3.8-15 and 3.8-16 of the GP PEIR discuss the potential for General Plan implementation to deplete groundwater supplies and interfere with groundwater recharge (Impact #3.8-2). As stated in the GP PEIR, the City primarily depends on groundwater sources that draw from the San Joaquin aquifer and has instituted water conservation measures in response to prolonged drought conditions. The City is within the Merced Subbasin, which the Department of Water Resources identified as a critically overdrafted basin. General Plan Policies P-3.2 and P-4.2 of the Public Services and Facilities Element would ensure that groundwater resources are protected through development of new water conservation and recycling technologies and procedures, enhancement of surface water delivery systems, utilization of Merced Irrigation District water resources when water treatment is not needed, development of groundwater recharge facilities, and use of reclaimed water when practical. Although these policies would help to reduce impacts on groundwater supply and recharge, the GP PEIR states that the basin's rate of overdraft will continue to increase as urban development increases and no mitigation was available to reduce the impact. Therefore, impacts on groundwater supply and recharge would be significant and would result in a significant cumulative impact (City of Merced 2010).

Annexation of UC Merced would not result in additional decreases of groundwater supplies or interference with groundwater recharge. The GP PEIR evaluated the development and annexation of the UC Merced campus, as proposed in the 2009 LRDP. Therefore, impacts related to groundwater supply and recharge associated with development of the UC Merced campus in accordance with the 2009 LRDP are consistent with the impacts from implementation of the GP PEIR, described above.

The 2020 LRDP is the current planning document for development of the UC Merced campus. The 2020 LRDP SEIR evaluates the potential for development of the UC Merced campus in accordance with the 2020 LRDP to interfere with groundwater recharge and deplete groundwater supplies. With respect to groundwater recharge, the campus development proposed under the 2020 LRDP would be more compact than what was anticipated under the 2009 LRDP. Therefore, development the 2020 LRDP would result in a greater area for groundwater recharge compared to development under the 2009 LRDP. Furthermore, UC Merced developed a Water Action Plan in 2017 with strategies to improve groundwater recharge, which include incorporating low-impact development practices and stormwater retention basins into site design. Therefore, the revised LRDP would not result in a more severe or new impact on groundwater recharge (UC Merced 2019).

With regards to groundwater supplies, UC Merced is projected to grow at a slower pace than previously anticipated. Therefore, development of the UC Merced campus in accordance with the 2020 LRDP would have a lower water demand than projected for the 2009 LRDP. In addition, UC Merced's Water Action Plan includes actions to reduce water use on campus, such as implementing water efficient landscaping practices, using water efficient appliances and fixtures, conducting regular campus water audits, using low-flow water measurement sensors, and exploring new

opportunities for wastewater treatment. Furthermore, the City adopted 2020 UWMP, which outlines efforts to address overdraft conditions in the Merced Subbasin. These efforts include identifying new water sources for the City and adopting programs for groundwater recharge, water conservation and education, conjunctive use, water reclamation and recycling, and construction and operation of new water facilities. The 2020 LRDP would not result in a more severe or new impact on groundwater supplies.

Based on the above discussion, annexation of the UC Merced campus would not result in any new impacts or substantially increase the severity of impacts on groundwater supply and recharge beyond those identified for the 2009 LRDP, as evaluated in the GP PEIR. Therefore, the findings of the GP PEIR regarding groundwater supply and recharge remain valid and no new mitigation is required. This impact would remain significant and unavoidable.

- c) Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river or through the addition of impervious surfaces, in a manner which would:**
- i) Result in substantial on- or offsite erosion or siltation;**
 - ii) Substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or offsite;**
 - iii) Create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff; or**

Pages 3.8-16 and 3.8-17 of the GP PEIR discuss the potential for General Plan implementation to alter drainage patterns in a manner that results in substantial erosion or siltation or increase surface runoff in a manner that results in flooding (Impact #3.8-3). As stated in the GP PEIR, new development would increase impervious surfaces in the planning area, thereby increasing runoff that could increase erosion, siltation, or flooding. General Plan policies (Policy OS-5.2 of the Open Space Element, Policy P-1.1 of the Public Services and Facilities Element, Policies S-3.1 and S-3.2 of the Safety Element) would ensure that all new development has adequate storm drainage facilities and complies with applicable federal, State, and local regulations for stormwater management and flood prevention. The GP PEIR concludes that impacts from changes in drainage patterns would be less than significant and would be less than cumulatively considerable (City of Merced 2010).

Pages 3.8-17 and 3.8-18 of the GP PEIR discuss the potential for General Plan implementation to contribute runoff water in excess of existing stormwater drainage system capacity or result in additional sources of polluted runoff (Impact #3.8-4). As stated in the GP PEIR, new development applications would be evaluated for consistency with City Design Standards. General Plan policies (Policies P-1.1, P-5.1, P-5.2 of the Public Services and Facilities Element) would ensure that the City has adequate public infrastructure and services to meet the needs of future development. In addition, all new development would be required to comply with applicable federal, State, and local regulations for stormwater management and pollution prevention (i.e., preparation of a SWPPP for projects that disturb more than 1 acre).

Annexation of UC Merced would not result in additional impervious surfaces or changes to drainage patterns. The GP PEIR evaluates the development and annexation of the UC Merced campus, as proposed in the 2009 LRDP. Therefore, impacts from changes in drainage patterns associated with development of the UC Merced campus in accordance with the 2009 LRDP are consistent with the impacts from implementation of the GP PEIR, described above.

The 2020 LRDP is the current planning document for development of the UC Merced campus. The 2020 LRDP SEIR evaluates the potential for development of the UC Merced campus in accordance with the 2020 LRDP to result in effects from changes in drainage patterns. Although new development would generate storm water runoff, UC Merced would manage storm water flows through implementation of low impact development strategies and provision of storm water detention and retention facilities. In addition, new development would comply with UC Sustainable Practices Policy and the UC Merced Water Action Plan, which include actions for reduced storm water

runoff and improving water quality on the UC Merced campus. Furthermore, the campus development proposed under the 2020 LRDP would be more compact than what was anticipated under the 2009 LRDP, which would result in reduced surface runoff (UC Merced 2019).

Based on the above discussion, annexation of the UC Merced campus would not result in any new impacts from changes in drainage patterns beyond those identified for the 2009 LRDP, as evaluated in the GP PEIR. Therefore, the findings of the GP PEIR regarding impacts from changes in drainage patterns valid and no new mitigation is required. This impact would remain less than significant.

iv) Impede or redirect flood flows?

Pages 3.8-18 and 3.8-19 of the GP PEIR discuss the potential for General Plan implementation to impede or redirect flood flows (Impact #3.8-5). As stated in the GP PEIR, portions of the planning area are within the 100- and 500-year floodplains. General Plan Policies S-3.1 and S-3.2 of the Safety Element direct the City to limit development in hazardous areas and minimize flooding hazards. Where applicable, new development would be required to adhere to the City's Flood Damage Prevention Ordinance, Municipal Code, General Plan policies, Merced Irrigation District rules and regulations, and the Merced Storm Water Master Plan. The GP PEIR concludes that impacts related to impeding or redirecting flood flow would be less than significant and would be less than cumulatively considerable (City of Merced 2010).

Annexation of UC Merced would not result in new impediments to flood flows. The UC Merced campus is not within a 100-year flood hazard area (UC Merced 2018a). No physical changes would result from annexation that would affect flood flows.

Based on the above discussion, annexation of the UC Merced campus would not result in any new impacts related to impeding or redirecting flood flows. Therefore, the findings of the GP PEIR regarding flood flows remain valid and no new mitigation is required. This impact would remain less than significant.

d) In flood hazard, tsunami, or seiche zones, risk release of pollutants due to project inundation?

The GP PEIR did not specifically evaluate the potential for implementation of the General Plan, including development of the UC Merced campus in accordance with the 2009 LRDP, to risk release of pollutants due to project inundation. However, as noted in Section 3.12.2(c)(iv) above, the campus is not within a 100-year flood hazard area. Furthermore, the planning area is not within the inundation area of a dam and is not at risk of seiche or tsunami inundation (UC Merced 2018a). Therefore, annexation of the UC Merced campus would not result in any new significant impacts from the release of pollutants due to project inundation and no mitigation is required.

e) Conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan?

The GP PEIR did not specifically evaluate the potential for implementation of the General Plan, including development of the UC Merced campus in accordance with the 2009 LRDP, to conflict with a water quality control plan or sustainable groundwater management plan. However, as noted in Sections 3.12.2(a) and (b) above, Annexation of UC Merced would not result in more severe or new impacts on water quality and groundwater supplies beyond those identified in the GP PEIR. The 2020 LRDP, as evaluated in the certified 2020 LRDP SEIR, proposes a land use pattern that would decrease impervious area and increase the potential for groundwater recharge compared to the 2009 LRDP. Annexation would not result in any additional development. No new mitigation is required.

3.12.3 Mitigation Measures

No mitigation measures for hydrology and water quality were proposed in the GP PEIR and no new mitigation measures are required.

3.12.4 Conclusion

There are no significant impacts that are peculiar to the project. No new impacts have occurred nor has any new information been found requiring new analysis or verification. The project would not have any potentially significant impacts or cumulative impacts that were not discussed in the GP PEIR. Therefore, the conclusions of the GP PEIR remain valid and approval of the project would not require additional environmental review.

3.13 LAND USE AND PLANNING

ENVIRONMENTAL ISSUES	Impact Examined in GP PEIR?	Could Annexation Result in a New or Substantially More Severe Impact?*	Are there Changes in Circumstance or New Information Available that Could Result in a Substantially More Severe Impact?	Do Mitigation Measures and/or Design Features Address/ Resolve Impacts, Including Impacts That Would Otherwise be New or Substantially More Severe?
Would the project:				
a) Physically divide an established community?	Impact #3.9-1: Physically divide an established community, pp. 3.9-17 to 3.9-20	No	No	N/A
b) Cause a significant environmental impact due to a conflict with any land use plan, policy, or regulation adopted for the purpose of avoiding or mitigating an environmental effect?	Impact #3.9-2: Conflict with any applicable land use plan, policy, or regulation, pp. 3.9-20 and 3.9-21	No	No	N/A

*Determination does not factor implementation of previously adopted mitigation.

3.13.1 Environmental Setting

The GP PEIR describes the conditions in the City and SUDP/SOI and applicable State and local land use and planning regulations. No substantial change in the environmental setting related to land use and planning, described in the GP PEIR Section 3.9, "Land Use and Planning," has occurred since certification of the GP PEIR. Existing and planned land uses in the SUDP/SOI surrounding the UC Merced campus are consistent with the conditions described in the GP PEIR. No substantial changes in pertinent regulations have occurred.

3.13.2 Discussion

a) Physically divide an established community?

Pages 3.9-17 to 3.9-20 of the GP PEIR discuss the potential for General Plan implementation to divide established communities (Impact #3.9-1). As described in the GP PEIR, development within the planning area would generally follow existing development patterns. General Plan policies would ensure that new development patterns maintain a compact urban form, urban expansion boundaries are controlled, connectivity is maintained between existing and planned urban areas, and new development has reasonable access to public services and facilities (Policies UE-1.1 and UE-1.2 of the Urban Expansion Element and Policies LU-1.9 and LU-3.2 of the Land Use Element). Therefore, the GP PEIR concluded that impacts related to the division of established communities would be less than significant, and no significant cumulative impacts were identified (City of Merced 2010).

Annexation of UC Merced would not divide an established community. The area proposed for annexation consists of the existing university (including the undeveloped planning area) and the 2-mile portion of Bellevue Road between G Street and Lake Road. The project would not result in physical changes to the areas proposed for annexation. Incorporating Bellevue Road into the City would, therefore, not physically divide the existing rural residential community in the unincorporated area north and south of Bellevue Road.

Based on the above discussion, annexation of the UC Merced campus would not result in any new impacts related to dividing established communities. Therefore, the findings of the GP PEIR regarding the division of established communities remain valid and no new mitigation is required. This impact would remain less than significant.

b) Cause a significant environmental impact due to a conflict with any land use plan, policy, or regulation adopted for the purpose of avoiding or mitigating an environmental effect?

The Cortese-Knox-Hertzberg Local Government Reorganization Act of 2000 provides the sole and exclusive authority and procedure for the initiation, conduct, and completion of changes of organization and reorganization for cities and districts. The act grants a local agency formation commission the power to review and approve a change of organization of a local agency, which includes an annexation into a city. The act generally requires that a territory to be annexed be contiguous to the city at the time the proposal is initiated. The act also requires each commission to develop and determine the sphere of influence of each city and special district within the county. The act defines sphere of influence, for purposes of these provisions, as a plan for the probable physical boundaries and service area of the local agency, as determined by the commission.

Pages 3.9-20 and 3.9-21 of the GP PEIR discuss the potential for General Plan implementation to conflict with applicable land use plans, policies, and regulations (Impact #3.9-2). As described in the GP PEIR, the General Plan is the primary planning document for the City. General Plan policies would ensure that the City's other documents and plans are updated as necessary for consistency with the General Plan and that expansion and annexations are consistent with Merced County Local Agency Formation Commission policies and procedures (Policy-1.2 of the Public Services and Facilities Element, Policies UE-1.2, UE-1.3, and UE-1.5 of the Urban Expansion Element, Policy P-1.3 of the Public Services and Facilities Element, Policy T-3.2 of the Transportation Element, Policy L-3.2 of the Land Use Element). Therefore, the GP PEIR concluded that impacts related to conflicts with land use plans, policies, and regulations would be less than significant, and no significant cumulative impacts were identified (City of Merced 2010).

Annexation of UC Merced would not create new conflicts with existing land use plans, policies, and regulations. The annexation was conceptually evaluated in the GP PEIR and is consistent with the General Plan. As a result, the City's planning documents anticipate future development of the campus (UC Merced 2018a). Further, the annexation would be conducted in a manner consistent with Merced County Local Agency Formation Commission policies and procedures, as well as AB 3312.

AB 3312, signed into law in 2020, authorizes the annexation of territory comprising the main campus of UC Merced, as specified, and the road strip, as defined, to the City of Merced, notwithstanding the requirement that the territory be contiguous with the city, if other conditions are met, including that the territory is within the city's sphere of influence. The bill prohibits the Merced County Local Agency Formation Commission from approving a subsequent annexation to the road strip pursuant to these provisions unless the territory proposed to be annexed is contiguous to the property comprising the main campus of UC Merced or the boundaries of the City of Merced.

The proposed annexation would be consistent with the City's policies related to urban expansion, including the following:

- ▶ **UE-1.1** Designate areas for new urban development that recognize the physical characteristics and environmental constraints of the planning area.
- ▶ **UE-1.2** Foster compact and efficient development patterns to maintain a compact urban form.
- ▶ **UE-1.3** Control the annexation, timing, density, and location of new land uses within the City's urban expansion boundaries.
- ▶ **UE-1.4** Continue joint planning efforts on the UC Merced and University Community plans.
- ▶ **UE-1.5** Promote annexation of developed areas within the City's Specific Urban Development Plan (SUDP)/Sphere of Influence (SOI) during the planning period.

Based on the above discussion, annexation of the UC Merced campus would not result in any new impacts related to conflicts with land use plans, policies, and regulations. Therefore, the findings of the GP PEIR regarding conflicts with land use plans, policies, and regulations remain valid and no new mitigation is required. This impact would remain less than significant.

3.13.3 Mitigation Measures

No mitigation measures for land use and planning were proposed in the GP PEIR and no new mitigation measures are required.

3.13.4 Conclusion

There are no significant impacts that are peculiar to the project. No new impacts have occurred nor has any new information been found requiring new analysis or verification. The project would not have any potentially significant impacts or cumulative impacts that were not discussed in the GP PEIR. Therefore, the conclusions of the GP PEIR remain valid and approval of the project would not require additional environmental review.

3.14 MINERAL RESOURCES

ENVIRONMENTAL ISSUES	Impact Examined in GP PEIR?	Could Annexation Result in a New or Substantially More Severe Impact?*	Are there Changes in Circumstance or New Information Available that Could Result in a Substantially More Severe Impact?	Do Mitigation Measures and/or Design Features Address/Resolve Impacts, Including Impacts That Would Otherwise be New or Substantially More Severe?
Would the project:				
a) Result in the loss of availability of a known mineral resource that would be of value to the region and the residents of the state?	Impact #3.10-1: The proposed project could adversely affect the availability of a known mineral resource of value to the region and/or residents of the state, pp. 3.10-2 and 3.10-3	No	No	N/A
b) Result in the loss of availability of a locally important mineral resource recovery site delineated on a local general plan, specific plan, or other land use plan?	Impact #3.10-2: The proposed project could adversely affect the availability of a locally-important mineral resource recovery site delineated on a local general plan, specific plan or other land use plan, pp. 3.10-3	No	No	N/A

*Determination does not factor implementation of previously adopted mitigation.

3.14.1 Environmental Setting

The GP PEIR explains that there are no commercial deposits of aggregate, oil, or gas in the City and SUDP/SOI. Applicable State and local regulations are also described. No substantial change in the environmental setting related to mineral resources, described in the GP PEIR Section 3.10, "Mineral Resources," has occurred since certification of the GP PEIR. Conditions in the SUDP/SOI surrounding the UC Merced campus are consistent with the conditions described in the GP PEIR. No changes in pertinent regulations have occurred.

3.14.2 Discussion

- a) **Result in the loss of availability of a known mineral resource that would be of value to the region and the residents of the state?**

This topic is addressed in Section 3.14.2(b) below.

- b) **Result in the loss of availability of a locally important mineral resource recovery site delineated on a local general plan, specific plan, or other land use plan?**

Pages 3.10-2 and 3.10-3 of the GP PEIR discuss the potential for General Plan implementation to result in the loss of availability of mineral resources (Impact #3.9-1 and Impact #3.9-2). As described in the GP PEIR, there are no known economic deposits of precious or base metals within the planning area and no economic deposits of aggregate minerals that are mined within the planning area. In addition, there are no Mineral Resource Zones or mineral resource recovery sites within the planning area. Therefore, the GP PEIR concluded that there would be no impact on mineral resources, and no significant cumulative impacts were identified (City of Merced 2010).

Annexation of UC Merced would not result in the loss of mineral resources. The UC Merced campus is not designated as a Mineral Resource Zone and there are no known or potential mineral resources on the campus (UC Merced 2018a).

Based on the above discussion, annexation of the UC Merced campus would not result in any new impacts on mineral resources. Therefore, the findings of the GP PEIR regarding mineral resources remain valid and no new mitigation is required. There would continue to be no impact.

3.14.3 Mitigation Measures

No mitigation measures for mineral resources were proposed in the GP PEIR and no new mitigation measures are required.

3.14.4 Conclusion

There are no significant impacts that are peculiar to the project. No new impacts have occurred nor has any new information been found requiring new analysis or verification. The project would not have any potentially significant impacts or cumulative impacts that were not discussed in the GP PEIR. Therefore, the conclusions of the GP PEIR remain valid and approval of the project would not require additional environmental review.

3.15 NOISE

ENVIRONMENTAL ISSUES	Impact Examined in GP PEIR?	Could Annexation Result in a New or Substantially More Severe Impact?*	Are there Changes in Circumstance or New Information Available that Could Result in a Substantially More Severe Impact?	Do Mitigation Measures and/or Design Features Address/Resolve Impacts, Including Impacts That Would Otherwise be New or Substantially More Severe?
Would the project result in:				
a) Generation of a substantial temporary or permanent increase in ambient noise levels in the vicinity of the project in excess of standards established in the local general plan or noise ordinance, or in other applicable local, state, or federal standards?	Impact #3.11-1: Buildout of the General Plan may contribute to increased traffic noise levels, and an exceedance of the City's noise standards and resulting in potential noise impacts to new sensitive receptors, pp. 3.11-21 to 3.11-29			
	Impact #3.11-2: Buildout of the General Plan may contribute to increased traffic noise levels, and a significant increase in overall traffic noise levels at existing sensitive receptors, p. 3.11-29			
	Impact #3.11-3: Buildout of the General Plan will result in construction activities which will contribute to the overall ambient noise environment, pp. 3.11-29 and 3.11-30	No	No	N/A
b) Generation of excessive groundborne vibration or groundborne noise levels?	Impact #3.11-5: Proposed General Plan Buildout could expose new noise-sensitive receptors to railroad noise levels, pp. 3.11-32			
	Impact #3.11-6: The Proposed General Plan Buildout may include stationary noise sources such as automotive and truck repair facilities, tire installation centers, car washes, loading docks, corporation yards, parks, and play fields may create noise levels in excess of the City standards, p. 3.11-33			
	Impact #3.11-4: Proposed General Plan Buildout will result in construction activities which could contribute to vibration levels at building facades, pp. 3.11-31 to 3.11-32	No	No	Yes

ENVIRONMENTAL ISSUES	Impact Examined in GP PEIR?	Could Annexation Result in a New or Substantially More Severe Impact?*	Are there Changes in Circumstance or New Information Available that Could Result in a Substantially More Severe Impact?	Do Mitigation Measures and/or Design Features Address/Resolve Impacts, Including Impacts That Would Otherwise be New or Substantially More Severe?
c) For a project located within the vicinity of a private airstrip or an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project expose people residing or working in the project area to excessive noise levels?	Impact #3.11-7: Proposed General Plan Buildout could expose new noise sensitive receptors to aircraft operations noise levels, p. 3.11-33	No	No	N/A

*Determination does not factor implementation of previously adopted mitigation.

3.15.1 Environmental Setting

The GP PEIR describes acoustic terminology; existing roadway, railroad, and airport noise levels; fixed noise sources; and community noise levels. Applicable federal, State, and local regulations are also explained. No substantial change in the environmental setting related to noise, described in the GP PEIR Section 3.11, "Noise," has occurred since certification of the GP PEIR. Noise-generating uses and sensitive receptors in the SUDP/SOI surrounding the UC Merced campus are generally consistent with the conditions described in the GP PEIR. No changes in pertinent regulations have occurred.

3.15.2 Discussion

a) **Generation of a substantial temporary or permanent increase in ambient noise levels in the vicinity of the project in excess of standards established in the local general plan or noise ordinance, or in other applicable local, state, or federal standards?**

Pages 3.11-21 to 3.11-29 of the GP PEIR discuss the potential for General Plan implementation to generate noise levels in excess of applicable standards from mobile sources (Impact #3.11-1, #3.11-2, and #3.11-5), construction activities (Impact #3.11-3), and stationary sources (Impact #3.11-6). The GP PEIR identified several noise receptors that would experience a significant increase in traffic noise levels (i.e., increase of four decibels). The use of construction equipment and vehicles could also result in temporary noise impacts. In addition, new development could result in noise sources (e.g., railroad tracks, commercial and industrial facilities, and recreational land uses) located near noise-sensitive land uses. The General Plan Noise Element includes several implementing actions and criteria used to address noise impacts, which include discouraging traffic in residential areas, restricting hours of construction activities and using noise controls on construction equipment, defining noise level standards for new projects, and requiring mitigation for projects that generate noise levels in excess of applicable standards, where applicable. The GP PEIR concludes that impacts related to the generation of noise levels in excess of applicable standards would be less than significant, and no cumulative impacts were identified with respect to the effect of road traffic and railroad noise on new sensitive receptors (Impacts #3.11-1 and #3.11-5), construction activities (Impact #3.11-3), and stationary sources (Impact #3.11-6). However, impacts on existing sensitive receptors from increased traffic noise levels were determined to be significant and unavoidable (City of Merced 2010).

Annexation of UC Merced would not create new noise sources. Traffic volumes used to project increased traffic noise levels in the GP PEIR included assumptions for traffic generated by UC Merced, as envisioned in the 2009 LRDP EIR.

The 2020 LRDP SEIR, which evaluates the potential effects of UC Merced based on the most current LRDP, concludes that noise levels from campus development would not exceed applicable standards based on the distance from the campus to the nearest off-site noise-sensitive receptors. Furthermore, noise-generating equipment used on campus would be fitted with noise attenuation barriers, such that noise levels would not exceed applicable standards for on-campus noise-sensitive receptors (UC Merced 2019). Traffic generated by campus development would not result in a significant noise impact on receptors along the routes used by campus population, including residences along Lake and Bellevue Roads. Ambient traffic noise from Bellevue Road would increase from approximately 59 dBA Ldn to about 63 dBA Ldn in 2030. Noise levels at residences at a distance of up to 80 feet from this roadway would experience a slightly higher noise level increase. Along Lake Road, noise levels would increase from about 61 dBA Ldn to about 63 dBA Ldn in 2030. The resulting noise levels in 2030 along both roadways would not result in a significant impact (UC Merced 2019: 4.5-10).

Based on the above discussion, annexation of the UC Merced campus would not result in any new impacts or substantially increase the severity of impacts related to noise increases in excess of applicable standards that were identified for the 2009 LRDP, as evaluated in the GP PEIR. Therefore, the findings of the GP PEIR regarding noise increases in excess of applicable standards remain valid and no new mitigation is required. This impact would remain significant and unavoidable.

b) Generation of excessive groundborne vibration or groundborne noise levels?

Pages 3.11-31 to 3.11-32 of the GP PEIR discuss the potential for General Plan implementation to require construction activities that cause vibration (Impact #3.11-4). As stated in the GP PEIR, certain construction activities may produce noise and vibration levels that could be excessive or result in damage to structures. Mitigation Measure #3.11-4 would require additional site-specific analysis of vibration impacts for any construction activities requiring the use of pile drivers or large vibratory compactors. With implementation of Mitigation Measure #3.11-4, the GP PEIR concludes that impacts related to the generation of excessive groundborne vibration and noise would be less than significant, and no significant cumulative impacts were identified (City of Merced 2010).

The 2020 LRDP SEIR evaluates impacts from groundborne vibration generated during pile driving activities. Construction activities associated with implementation of the 2020 LRDP could require pile driving with potential to cause structural damage, human annoyance, and disruptions to laboratory experiments. UC Merced has committed to limiting impact pile driving in vibration-sensitive areas, notifying occupants of vibration-generating activities near sensitive facilities, and implementing other project-specific measures to minimize construction vibration damage (LRDP MM NOI-4a and MM-NOI-4b) to reduce impacts to less than significant levels (UC Merced 2019).

Based on the above discussion, annexation of the UC Merced campus would not result in any new impacts from the generation of excessive groundborne vibration and noise. Therefore, the findings of the GP PEIR regarding the generation of excessive groundborne vibration and noise remain valid and no new mitigation is required. This impact would remain less than significant.

c) For a project located within the vicinity of a private airstrip or an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project expose people residing or working in the project area to excessive noise levels?

Page 3.11-33 of the GP PEIR discusses the potential for General Plan implementation to expose noise sensitive receptors to noise levels associated with aircraft operations (Impact #3.11-7). As stated in the GP PEIR, development in the planning area could be located in proximity to Merced Regional Airport, Castle Airport, and other privately owned airfields. However, new development would be reviewed for consistency with the Merced County Airport Land Use Compatibility Plan and measures from the General Plan Noise Element would be implemented to mitigate aircraft operation noise, where applicable. The GP PEIR concludes that impacts from excessive airport noise levels would be less than significant, and no cumulative impacts were identified (City of Merced 2010).

Annexation of UC Merced would not expose more people to excessive airport noise levels. There are no airports within the vicinity of the LRDP planning area with potential to result in excessive noise levels at the campus. The nearest airport is the Merced Regional Airport, which is located 7 miles from the LRDP planning area (UC Merced 2018a).

Based on the above discussion, annexation of the UC Merced campus would not result in any new impacts from excessive airport noise levels. Therefore, the findings of the GP PEIR regarding excessive airport noise levels remain valid and no new mitigation is required. This impact would remain less than significant.

3.15.3 Mitigation Measures

The following mitigation measure was adopted upon approval of the General Plan to mitigate impacts associated with construction vibration.

Mitigation Measure #3.1-4: Table 3.11-13 provides criteria for evaluating construction vibration impacts. If construction activities include the use of pile drivers or large vibratory compactors, an analysis of potential vibration impacts should be conducted. The vibration impacts should not exceed a peak particle velocity of 0.1 inches/second.

Table 3.11-13 Effects of Vibration on People and Buildings

Peak Particle Velocity inches/second	Peak Particle Velocity mm/second	Human Reaction	Effect on Buildings
0-0.006	0.15	Imperceptible by people	Vibrations unlikely to cause damage of any type
0.006-0.02	0.5	Range of Threshold of perception	Vibrations unlikely to cause damage of any type
0.08	2.0	Vibrations clearly perceptible	Recommended upper level of which ruins and ancient monuments should be subjected
0.1	2.54	Level at which continuous vibrations begin to annoy people	Virtually no risk of architectural damage to normal buildings
0.2	5.0	Vibrations annoying to people in buildings	Threshold at which there is a risk of architectural damage to normal dwellings
1.0	25.4	--	Architectural Damage
2.0	50.4	--	Structural Damage to Residential Buildings
6.0	151.0	--	Structural Damage to Commercial Buildings

Source: Survey of Earth-borne Vibrations due to Highway Construction and Highway Traffic, Caltrans 1976.

As described above, UC Merced has committed to project-specific measures to minimize construction vibration damage. LRDP MM NOI-4a limits groundborne vibration due to construction activities to 0.50 inch/second, peak particle velocity, for impact pile driving activities occurring within 50 feet of typical structures. This is less than the 1 inch/second threshold in the City's mitigation measure and is, therefore, more stringent. See Appendix A for the full text of the mitigation measures adopted for the 2020 LRDP. No new mitigation measures are required.

3.15.4 Conclusion

There are no significant impacts that are peculiar to the project. No new impacts have occurred nor has any new information been found requiring new analysis or verification. The project would not have any potentially significant impacts or cumulative impacts that were not discussed in the GP PEIR. Therefore, the conclusions of the GP PEIR remain valid and approval of the project would not require additional environmental review.

3.16 POPULATION AND HOUSING

ENVIRONMENTAL ISSUES	Impact Examined in GP PEIR?	Could Annexation Result in a New or Substantially More Severe Impact?*	Are there Changes in Circumstance or New Information Available that Could Result in a Substantially More Severe Impact?	Do Mitigation Measures and/or Design Features Address/Resolve Impacts, Including Impacts That Would Otherwise be New or Substantially More Severe?
Would the project:				
a) Induce substantial unplanned population growth in an area, either directly (for example, by proposing new homes and businesses) or indirectly (for example, through extension of roads or other infrastructure)?	Impact #3.12-8: Induce substantial population growth in an area, either directly or indirectly, pp. 3.12-8 to 3.12-10	No	No	N/A
b) Displace substantial numbers of existing people or housing, necessitating the construction of replacement housing elsewhere?	Impact #3.12-2: Displace a substantial number of people or existing housing, necessitating the construction of replacement housing elsewhere, pp. 3.12-10	No	No	N/A

*Determination does not factor implementation of previously adopted mitigation.

3.16.1 Environmental Setting

The GP PEIR describes population trends, household size, age characteristics, and employment for the City and Merced County. No substantial change in the environmental setting related to population and housing, described in the GP PEIR Section 3.12, "Population and Housing," has occurred since certification of the GP PEIR. As discussed in the GP PEIR, the Merced County Association of Governments projected that the City of Merced would have a population of 97,700 residents and the County of Merced would have a population of 340,800 residents in 2020 (City of Merced 2010). Based on the most recent U.S. census data, the 2020 population was 86,333 residents in the City of Merced and 281,202 residents in the County of Merced (U.S. Census Bureau 2020). Based on this data, actual population growth within the City and County of Merced was less than previously anticipated in the GP PEIR. No changes in pertinent regulations have occurred.

3.16.2 Discussion

- a) **Induce substantial unplanned population growth in an area, either directly (for example, by proposing new homes and businesses) or indirectly (for example, through extension of roads or other infrastructure)?**

Pages 3.12-8 to 3.12-10 of the GP PEIR discuss the potential for General Plan implementation to induce substantial unplanned population growth (Impact #3.12-1). The General Plan includes policies and standards to regulate future growth that would be allowed under the plan, with higher intensity development focused in existing urban areas. In addition, the General Plan includes policies to ensure that adequate housing, jobs, and public facilities and services are available to support planned population growth. Applicable policies include Policies UD-1.1 through UD-1.5 of the Urban Design Element, Policies UE-1.2 and UE-1.3 of the Urban Expansion Element, Policies LU-1.1 to LU-1.3, LU-1.9, LU-2.1, LU-2.6, LU-2.7, LU-2.9, LU-2.10, and LU-3.1 to LU-3.3 of the Land Use Element, and Policies H-1.1 to H-1.3, H-

1.5 to H-1.8, H-2.1 to H-2.4 of the Housing Element. The GP PEIR concluded that impacts related to inducing substantial unplanned population growth would be less than significant, and no significant cumulative impacts were identified (City of Merced 2010).

Annexation of UC Merced would not induce additional unplanned population growth. The GP PEIR evaluated the development and annexation of the UC Merced campus, as proposed in the 2009 LRDP, and development of the adjacent SUDP/SOI within the planning horizon. Therefore, population growth from development of UC Merced was included in the GP PEIR impacts described above.

Roads and other infrastructure required to serve the UC Merced campus are in place or currently planned through established pre-annexation agreements. The infrastructure is sized to accommodate the campus and planned development of the SUDP/SOI and would not indirectly induce unplanned growth in the unincorporated county. Under the 2020 LRDP, as evaluated in the certified 2020 LRDP SEIR, UC Merced is now projected to grow at a slower pace than anticipated in the 2009 LRDP EIR. It is estimated that enough housing units would be available in the City and surrounding area to accommodate the anticipated growth at the UC Merced campus (UC Merced 2019). Furthermore, because the General Plan and associated documents identify annexation of UC Merced as a policy objective, the population growth that would result from annexation would not be unplanned.

Based on the above discussion, annexation of the UC Merced campus would not result in any new impacts related to inducing substantial unplanned population growth. Therefore, the findings of the GP PEIR regarding inducing substantial unplanned population growth remain valid and no new mitigation is required. This impact would remain less than significant.

b) Displace substantial numbers of existing people or housing, necessitating the construction of replacement housing elsewhere?

Page 3.12-8 of the GP PEIR discusses the potential for General Plan implementation to displace people or existing housing (Impact #3.12-2). As described in the GP PEIR, most new development permitted by the General Plan would occur on infill locations, undeveloped parcels, or parcels that can be subdivided, rather than redevelopment of existing developed land and buildings. Therefore, the GP PEIR concluded that impacts related to displacing people or existing housing would be less than significant, and no significant cumulative impacts were identified (City of Merced 2010).

The UC Merced campus consists of the existing, developed university and undeveloped grazing land (UC Merced 2018a). Annexation of the UC Merced campus would not displace people or housing. In addition, as a result of AB 3312, annexation of the existing residential land between the city limit and the UC Merced campus would not be required. As a result, indirect effects on existing residents are not anticipated. Therefore, the findings of the GP PEIR regarding inducing substantial unplanned population growth remain valid and no new mitigation is required. This impact would remain less than significant.

3.16.3 Mitigation Measures

No mitigation measures for population and housing were proposed in the GP PEIR and no new mitigation measures are required.

3.16.4 Conclusion

There are no significant impacts that are peculiar to the project. No new impacts have occurred nor has any new information been found requiring new analysis or verification. The project would not have any potentially significant impacts or cumulative impacts that were not discussed in the GP PEIR. Therefore, the conclusions of the GP PEIR remain valid and approval of the project would not require additional environmental review.

3.17 PUBLIC SERVICES

ENVIRONMENTAL ISSUES	Impact Examined in GP PEIR?	Could Annexation Result in a New or Substantially More Severe Impact?*	Are there Changes in Circumstance or New Information Available that Could Result in a Substantially More Severe Impact?	Do Mitigation Measures and/or Design Features Address/Resolve Impacts, Including Impacts That Would Otherwise be New or Substantially More Severe?
Would the project:				
a) Result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, or the need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times, or other performance objectives for any of the public services:				
Fire protection?	Impact #3.14-2: Result in substantial adverse physical impact to the continued provision of fire protection services in the City, pp. 3.14-13 and 3.14-14	No	No	N/A
Police protection?	Impact #3.14-1: Result in a substantial adverse physical impact to the continued provision of law enforcement services in the City, pp. 3.14-12 and 3.14-13	No	No	Yes
Schools?	Impact # 3.14-3: Result in a substantial adverse physical impact to the continued provision of school services in the City	No	No	N/A
Parks?	Refer to Impacts #3.13-1 and #3.13-2 in Section 3.18, "Recreation," below.	No	No	N/A
Other public facilities?	Impact #3.14-4: Result in a substantial increase in the demand for other public services and facilities, pp. 3.14-16 and 3.14-17	No	No	N/A

*Determination does not factor implementation of previously adopted mitigation.

3.17.1 Environmental Setting

The GP PEIR describes existing conditions related to police, fire protection, schools, libraries, health services, and government facilities. Applicable local regulations are also explained. No substantial change in the environmental setting related to public services, described in the GP PEIR Section 3.14, "Public Services," has occurred since certification of the GP PEIR. Public services in the SDUP/SOI surrounding the UC Merced campus are consistent with the conditions described in the GP PEIR. Existing and proposed land uses remain consistent with the conditions described. No changes in pertinent regulations have occurred.

3.17.2 Discussion

- a) **Result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, or the need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times, or other performance objectives for any of the public services:**

Fire protection?

Pages 3.14-13 and 3.14-14 of the GP PEIR discuss the potential for General Plan implementation to result in adverse physical impacts from the provision of fire protection services in the City (Impact #3.14-2). As described in the GP PEIR, the City would need to relocate two existing fire stations and add five new facilities with personnel and equipment to meet the needs of anticipated population growth associated with General Plan buildout. General Plan policies would ensure that adequate fire protection services, facilities, and infrastructure support are provided for the community, and that fire department response objectives continue to be met (Policy P-2.1 of the Public Services and Facilities Element and S-4.1 and S-4.2 of the Safety Element). Therefore, the GP PEIR concluded that impacts related to the construction of new fire protection facilities would be less than significant, and no significant cumulative impacts were identified (City of Merced 2010).

Annexation of UC Merced would not result in additional environmental impacts from new fire protection facilities. The GP PEIR considered long-term development and annexation of the SDUP/SOI, including the UC Merced campus. Therefore, impacts related to the construction of new fire protection facilities from development of the UC Merced campus in accordance with the 2009 LRDP are consistent with the impacts from implementation of the GP PEIR, described above. Public service providers, including the City of Merced Fire Department, plan to serve the area within the SDUP/SOI upon annexation. Upon annexation, UC Merced's existing memorandum of understanding with Merced County for fire protection services would be transferred to the City.

The 2020 LRDP is the current planning document for development of the UC Merced campus. The 2020 LRDP SEIR evaluates impacts related to fire protection services and concludes that the revised LRDP would not result in a more severe or new impact on fire protection services beyond that identified for the 2009 LRDP. The 2020 LRDP SEIR identified various options for the provision of fire service to the expanded campus, which include: (1) continuing to contract with the Merced County Fire Department, (2) contracting with the Merced City Fire Department, or (3) constructing an on-site UC Merced Fire Department. The 2020 LRDP SEIR concluded that response times would not be adversely affected and determined that the environmental impacts associated with construction of new fire stations or facilities would be mitigated through compliance with the City's GP PEIR (UC Merced 2019).

As described above, the City evaluated potential fire station sites in the GP PEIR based on the General Plan. Two of the fire station sites evaluated were in proximity to the UC Merced campus. Based on current planning, no additional fire stations would be required to serve the annexation area beyond those evaluated in the GP PEIR. Further, because fire stations are within the scope of the development disclosed in the GP PEIR, the locations of the stations may differ from those assumed in the GP PEIR. As acknowledged in the GP PEIR, "The actual location of new and expanded facilities will depend on the pattern of growth...which is not known at this time. However, fire and emergency response would be allowed in most proposed General Plan land use designations" (City of Merced 2010). Further,

given that the student population projections are less than assumed in the GP PEIR, there would not be an increase in demand for fire protection beyond previous projections.

Based on the above discussion, annexation of the UC Merced campus would not result in any new impacts from the construction of new fire protection facilities that were identified for the 2009 LRDP, as evaluated in the GP PEIR. Therefore, the findings of the GP PEIR regarding the construction of new fire protection facilities remain valid and no new mitigation is required. This impact would remain less than significant.

Police protection?

Pages 3.14-12 and 3.14-13 of the GP PEIR discuss the potential for General Plan implementation to result in adverse physical impacts from the provision of police protection services in the City (Impact #3.14-1). As described in the GP PEIR, the City would need approximately 91 police officers and additional support staff and facility space to meet the needs of anticipated population growth associated with General Plan buildout. General Plan policies would ensure that adequate police protection services and facilities are provided for the community (Policy P-1.3 and P-2.1 of the Public Services and Facilities Element and S-6.1 and S-6.2 of the Safety Element). Therefore, the GP PEIR concluded that impacts related to police protection services would be less than significant, and no significant cumulative impacts were identified (City of Merced 2010).

The UC Merced Police Department serves the UC Merced community and associated university property 24 hours a day, 365 days a year. UC Merced would continue to be served by the existing police department upon annexation. Furthermore, the mitigation adopted for the 2009 LRDP (LRDP MM PUB-1) commits the university to maintain a ratio of 0.7 officers for every 1,000 members of the campus population (UC Merced 2009). Therefore, City services would not be required. Annexation would not result in the need for new or physically altered governmental facilities to maintain acceptable service ratios, response times, or other performance objectives.

Based on the above discussion, annexation of the UC Merced campus would not result in any new impacts related to police protection services. Therefore, the findings of the GP PEIR regarding police protection services remain valid and no new mitigation is required. This impact would remain less than significant.

Schools?

Page 3.14-15 of the GP PEIR discusses the potential for General Plan implementation to result in adverse physical impacts from the provision of school services in the City (Impact #3.14-3). As described in the GP PEIR, the anticipated population growth associated with General Plan buildout would result in increased student generation and the need for additional elementary, junior high, and high school facilities in the city. General Plan policies would ensure that adequate educational facilities are provided to meet the needs of current and future students (Policy P-7.1 and P-7.2 of the Public Services and Facilities Element). Therefore, the GP PEIR concluded that there would be no impact related to school services, and no significant cumulative impacts were identified (City of Merced 2010).

Annexation of UC Merced would not result in additional environmental impacts from new school facilities. The GP PEIR evaluated the development and annexation of the UC Merced campus, as proposed in the 2009 LRDP. Therefore, impacts related to school services from development of the UC Merced campus in accordance with the 2009 LRDP are consistent with the impacts from implementation of the GP PEIR, described above.

The 2020 LRDP is the current planning document for development of the UC Merced campus. The 2020 LRDP SEIR evaluates impacts related to the provision of school services and concluded that the revised LRDP would not result in a more severe or new impact on school services beyond that identified for the 2009 LRDP. Because UC Merced is projected to grow at a slower pace than previously anticipated, development of the UC Merced campus in accordance with the 2020 LRDP would not increase the elementary through high school student population and demand for the City's school facilities when compared to the 2009 LRDP (UC Merced 2019).

Based on the above discussion, annexation of the UC Merced campus would not result in any new impacts related to school services. Therefore, the findings of the GP PEIR regarding school services remain valid and no new mitigation is required. There would continue to be no impact.

Parks?

Refer to Impacts #3.13-1 and #3.13-2 in Section 3.18, "Recreation," below. Based on the discussion in Section 3.18, annexation of the UC Merced campus would not result in any new impacts related to parks. The findings of the GP PEIR regarding parks remain valid and no new mitigation is required. This impact would remain less than significant.

Other public facilities?

Pages 3.14-16 and 3.14-17 of the GP PEIR discuss the potential for General Plan implementation to increase the demand for other public services and facilities in the city (Impact #3.14-4). As described in the GP PEIR, the anticipated population growth associated with General Plan buildout would result in increased demands for libraries, government facilities, and health service facilities in the county and city. General Plan policies would ensure that adequate library and health services and facilities are provided to meet the needs of the community (Policy P-8.1 to P-8.3 of the Public Services and Facilities Element). Therefore, the GP PEIR concluded that impacts on other public facilities would be less than significant, and no significant cumulative impacts were identified (City of Merced 2010).

Annexation of UC Merced would not result in additional environmental impacts from other new public facilities. The GP PEIR evaluated the development and annexation of the UC Merced campus, as proposed in the 2009 LRDP. Therefore, impacts related to public facilities from development of the UC Merced campus in accordance with the 2009 LRDP are consistent with the impacts from implementation of the GP PEIR, described above.

The 2020 LRDP is the current planning document for development of the UC Merced campus. As described above, UC Merced is projected to grow at a slower pace than previously anticipated. As a result, development of the UC Merced campus in accordance with the 2020 LRDP would not increase the demand for the library facilities when compared to the 2009 LRDP. Furthermore, UC Merced's library system would continue to provide library services to the campus community (UC Merced 2019).

Based on the above discussion, annexation of the UC Merced campus would not result in any new impacts related to other public facilities. Therefore, the findings of the GP PEIR regarding other public facilities remain valid and no new mitigation is required. This impact would remain less than significant.

3.17.3 Mitigation Measures

No mitigation measures for public services were proposed in the GP PEIR. The mitigation adopted for the 2009 LRDP (LRDP MM PUB-1) commits the university to maintain a ratio of 0.7 police officers for every 1,000 members of the campus population. See Appendix B for the full text of the mitigation measures adopted for the 2009 LRDP. No new mitigation measures are required.

3.17.4 Conclusion

There are no significant impacts that are peculiar to the project. No new impacts have occurred nor has any new information been found requiring new analysis or verification. The project would not have any potentially significant impacts or cumulative impacts that were not discussed in the GP PEIR. Therefore, the conclusions of the GP PEIR remain valid and approval of the project would not require additional environmental review.

3.18 RECREATION

ENVIRONMENTAL ISSUES	Impact Examined in GP PEIR?	Could Annexation Result in a New or Substantially More Severe Impact?*	Are there Changes in Circumstance or New Information Available that Could Result in a Substantially More Severe Impact?	Do Mitigation Measures and/or Design Features Address/Resolve Impacts, Including Impacts That Would Otherwise be New or Substantially More Severe?
Would the project:				
a) Increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated?	Impact #3.13-1: Increase the use of existing neighborhood and regional parks or other recreational facilities or require the construction or expansion of recreational facilities, pp. 3.13-7 and 3.13-8	No	No	Yes
b) Include recreational facilities or require the construction or expansion of recreational facilities that might have an adverse physical effect on the environment?	Impact #3.13-2: Does the project include recreational facilities or require the construction or expansion of recreational facilities which might have an adverse physical effect on the environment, pp. 3.13-8 and 3.13-9	No	No	N/A

*Determination does not factor implementation of previously adopted mitigation.

3.18.1 Environmental Setting

The GP PEIR provides an inventory of park land in the city and describes existing recreational resources. Applicable State and local regulations are also explained. No substantial change in the environmental setting related to recreation, described in the GP PEIR Section 3.13, "Recreation," has occurred since certification of the GP PEIR. The SUDP/SOI surrounding the UC Merced campus has not been developed and the demand for park facilities has not changed. No changes in pertinent regulations have occurred.

3.18.2 Discussion

- a) **Increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated?**

Pages 3.13-7 and 3.13-8 of the GP PEIR discuss the potential for General Plan implementation to increase the use of existing parks and recreational facilities or require the construction or expansion of recreational facilities (Impact #3.13-1). As stated in the GP PEIR, new development and population growth in the planning area would increase the demand for parks and recreational facilities. General Plan Policies OS-3.1 through OS-3.4 and OS-4.1 of the Open Space Element would ensure that the City continues to meet the recreation and open space needs of the growing population by providing 5 acres of parkland for every new 1,000 residents. The GP PEIR concludes that impacts on parks and recreational facilities would be less than significant and would be less than cumulatively considerable (City of Merced 2010).

Annexation of UC Merced would not increase the deterioration of existing parks and recreational facilities. The GP PEIR evaluates the development and annexation of the UC Merced campus, as proposed in the 2009 LRDP. Therefore, impacts related to the increased use of existing parks and recreational facilities associated with development of the UC Merced campus in accordance with the 2009 LRDP are consistent with the impacts from implementation of the GP PEIR, described above.

The 2020 LRDP is the current planning document for development of the UC Merced campus. Because UC Merced is projected to grow at a slower pace than previously anticipated, development of the UC Merced campus in accordance with the 2020 LRDP would place reduced demands on the Lake Yosemite Regional Park than the 2009 LRDP (UC Merced 2018a). Furthermore, the mitigation adopted for the 2009 LRDP (MM PUB-6) would apply to development of the 2020 LRDP. This mitigation commits UC Merced to (1) provide recreational opportunities for the community, (2) improve or fund improvements for existing facilities at Lake Yosemite Regional Park as necessitated by increased use associated with development of the campus, and (3) protect sensitive biological resources during improvement projects Lake Yosemite Regional Park (UC Merced 2009).

Based on the above discussion, annexation of the UC Merced campus would not result in any new impacts to existing recreational facilities. Therefore, the findings of the GP PEIR regarding the increased use of existing parks and recreational facilities remain valid and no new mitigation is required. This impact would remain less than significant.

b) Include recreational facilities or require the construction or expansion of recreational facilities that might have an adverse physical effect on the environment?

Pages 3.13-8 and 3.13-9 of the GP PEIR discuss the potential for General Plan implementation to include recreational facilities or require the construction or expansion of recreational facilities that might have an adverse physical effect on the environment (Impact #3.13-2). Population growth in the planning area would require the construction of new parks and recreational facilities to meet the standards of the City's General Plan and Park and Open Space Master Plan. General Plan Policy OS-3.1 of the Open Space Element would ensure that the City provides 5 acres of parkland for every 1,000 new residents. The City's Park Dedication Ordinance would further ensure the acquisition of park land and open space. In addition, development impact fees would finance new parks and recreational facilities. These policies would ensure that future development in the planning area would not increase the need for recreational facilities beyond those anticipated in the General Plan. The GP PEIR concludes that impacts on parks and recreational facilities would be less than significant and would be less than cumulatively considerable (City of Merced 2010).

Annexation of UC Merced would not result in additional environmental impacts from new recreational facilities. The GP PEIR evaluates the development and annexation of the UC Merced campus, as proposed in the 2009 LRDP. Therefore, impacts on the environment from new or expanded recreational facilities associated with development of the UC Merced campus in accordance with the 2009 LRDP are consistent with the impacts from implementation of the GP PEIR, described above.

The 2020 LRDP is the current planning document for development of the UC Merced campus. Because UC Merced is projected to grow at a slower pace than previously anticipated, development of the UC Merced campus in accordance with the 2020 LRDP would not increase the demand for parks and recreational facilities when compared to the 2009 LRDP. Furthermore, the 2020 LRDP would not result in a demand for off-site recreational facilities because recreational facilities and open space provided on campus would serve the residential campus population. Therefore, impacts from the 2020 LRDP were determined to be less than significant (UC Merced 2019).

Based on the above discussion, annexation of the UC Merced campus would not result in any new impacts. Therefore, the findings of the GP PEIR regarding impacts on the environment from new or expanded recreational facilities remain valid and no new mitigation is required. This impact would remain less than significant.

3.18.3 Mitigation Measures

No mitigation measures for recreation were proposed in the GP PEIR. The mitigation adopted for the 2009 LRDP (MM PUB-6) commits UC Merced to (1) provide recreational opportunities for the community, (2) improve or fund improvements for existing facilities at Lake Yosemite Regional Park as necessitated by increased use associated with development of the campus, and (3) protect sensitive biological resources during improvement projects Lake Yosemite Regional Park. See Appendix B for the full text of the mitigation measures adopted for the 2009 LRDP. No new mitigation measures are required.

3.18.4 Conclusion

There are no significant impacts that are peculiar to the project. No new impacts have occurred nor has any new information been found requiring new analysis or verification. The project would not have any potentially significant impacts or cumulative impacts that were not discussed in the GP PEIR. Therefore, the conclusions of the GP PEIR remain valid and approval of the project would not require additional environmental review.

3.19 TRANSPORTATION

ENVIRONMENTAL ISSUES	Impact Examined in GP PEIR?	Could Annexation Result in a New or Substantially More Severe Impact?*	Are there Changes in Circumstance or New Information Available that Could Result in a Substantially More Severe Impact?	Do Mitigation Measures and/or Design Features Address/Resolve Impacts, Including Impacts That Would Otherwise be New or Substantially More Severe?
Would the project:				
a) Conflict with a program, plan, ordinance or policy addressing the circulation system, including transit, roadway, bicycle, and pedestrian facilities?	Conflict with Adopted Policies Supporting Alternative Transportation, p. 3.15-31	No	No	N/A
b) Conflict or be inconsistent with CEQA Guidelines section 15064.3, subdivision (b)?	Not Analyzed	No	No	N/A
c) Substantially increase hazards due to a geometric design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?	Substantially increase hazards due to a design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment), pp. 3.15-30 to 3.15-31	No	No	N/A
d) Result in inadequate emergency access?	Result in Inadequate Emergency Access, p. 3.15-31	No	No	N/A

*Determination does not factor implementation of previously adopted mitigation.

3.19.1 Environmental Setting

The GP PEIR, certified in 2012, used automobile delay or level of service (LOS) as the primary metric to evaluate the project's CEQA transportation impacts, consistent with industry standards and the City General Plan goals and policies at the time.

On September 27, 2013, SB 743 was signed into law and started a process to change transportation impact analysis as part of CEQA. SB 743 directed the California Office of Planning and Research to revise the CEQA Guidelines to modify the criteria for determining the significance of transportation impacts to promote the reduction of GHG emissions, the development of multimodal transportation networks, and a diversity of land uses. Section 15064.3 of the CEQA Guidelines, adopted in December 2018, provides that vehicle miles traveled (VMT) is the "most appropriate measure of transportation impacts" and mandates analysis of VMT impacts effective July 1, 2020. Additionally, as detailed under Public Resources Code Section 21009(b)(2), LOS, or other measures of automobile delay, are no longer considered significant environmental impacts under CEQA. Because it was adopted prior to July 1, 2020, the adopted GP PEIR did not address conflicts with CEQA Guidelines Section 15064.3.

The GP PEIR was certified in 2012, several years before the amendment to the CEQA Guidelines adding VMT as the measure of transportation impacts. As provided in CEQA Guidelines Section 15007, "amendments to the guidelines apply prospectively only," and CEQA documents must meet the "content requirements in effect when the document was set out for public review," and "shall not need to be revised to conform to any new content requirements in guideline amendments taking effect before the document is finally approved." As directed by CEQA Guidelines Section 15007, the GP PEIR does not need to be revised to conform to the new VMT requirements. The change in law

(replacement of the LOS standard with VMT) does not constitute new significant information under CEQA (PRC 21166 or CEQA Guidelines 15162) as it does not constitute a new impact caused by the changes proposed in the project.

In addition, PRC 21155 and CEQA Guidelines 15162 specify that a subsequent or supplemental EIR may be required if new information becomes available, which was not known and could not have been known at the time the EIR was certified. Information regarding adverse effects of VMT on the environment was known at the time the GP PEIR was prepared. The GHG section of GP PEIR identifies vehicles as a source of CO₂ emissions; thus, the concept of VMT could have been evaluated in the transportation discussion as well. Under the proposed modifications, the UC Merced campus would be annexed into the City of Merced. The GP PEIR included the UC Merced campus within the SUDP/SOI and accounted for annexation of UC Merced within the impact analysis. Therefore, if VMT were analyzed within the GP PEIR it would have included the VMT associated with the UC Merced campus.

LOS may be reviewed by the City as part of development review. However, because LOS is no longer considered an appropriate metric for analyzing transportation impacts on the environment, analysis and mitigation measures related to LOS are not included in this discussion.

3.19.2 Discussion

a) **Conflict with a program, plan, ordinance or policy addressing the circulation system, including transit, roadway, bicycle, and pedestrian facilities?**

Page 3.15-31 of the GP PEIR discusses the potential for General Plan implementation to conflict with adopted policies supporting alternative transportation (Impact #3.15-6). The GP PEIR determined that future development within the Plan Area (which includes the UC Merced campus) would be subject to the 2030 General Plan Circulation Plan and Circulation Element policies that provide for future transit stations/transitways and an integrated system of pedestrian and bicycle trails. Therefore, it was determined that implementation of the GP PEIR would not conflict with alternative transportation policies, including those related to bicycles, pedestrians, and public transit. Thus, the GP PEIR concludes that there would be no impact.

The GP PEIR includes UC Merced campus within the SUDP/SOI; thus, it is assumed that the associated transit, bicycle, and pedestrian impact analysis was considered as part of the analysis. The 2020 LRDP SEIR, which evaluates the potential effects of UC Merced based on the most current LRDP, concludes that implementation of the LRDP would result in less-than-significant impacts to transit, bicycle, and pedestrian facilities. Additionally, as detailed in the 2020 LRDP SEIR, the LRDP does not propose any changes to transit service or infrastructure provided by non-University operators (UC Merced 2019).

Based on the above discussion, annexation of the UC Merced campus would not result in any new impacts or substantially increase the severity of impacts related to conflicting with programs, plans, ordinances, or policies addressing transit, bicycle, and pedestrian facilities. Therefore, the findings of the GP PEIR regarding transit, bicycle, and pedestrian facilities remain valid and no new mitigation is required. The significance conclusion would remain as no impact.

b) **Conflict or be inconsistent with CEQA Guidelines section 15064.3(b), which pertains to vehicle miles travelled?**

The GP PEIR does not address conflicts with CEQA Guidelines Section 15064.3 because it was adopted prior to July 1, 2020. Under the proposed modifications, the UC Merced campus would be annexed into the City of Merced. The GP PEIR included the UC Merced campus within the SUDP/SOI and accounted for annexation of UC Merced within the impact analysis. Therefore, if VMT were analyzed within the GP PEIR it would have included the VMT associated with the UC Merced campus. Thus, annexation of the UC Merced campus into the City of Merced would result in no change in VMT as compared to the VMT if it had been analyzed in the GP PEIR.

No new significant impacts or substantially more severe impacts would occur. The findings of the certified GP PEIR remain valid and no further analysis is required.

c) Substantially increase hazards due to a geometric design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?

Pages 3.15-30 to 3.15-31 of the GP PEIR discuss the potential for General Plan implementation to substantially increase hazards due to a design feature or incompatible uses (Impact #3.15-3). The GP PEIR determined that because future development within the plan area would be subject to the 2030 General Plan Circulation Plan and Circulation Element policies, and because roadway infrastructure improvements would be designed in accordance with the City's Roadway Design Standards, there would not be a significant increase in hazards due to design features or incompatible uses as the City General Plan is implemented. Therefore, the GP PEIR concludes that this impact would be less than significant.

The GP PEIR includes UC Merced campus within the SUDP/SOI, and, thus, it is assumed that the associated transportation hazard impact analysis was considered as part of the analysis. The 2020 LRDP SEIR, which evaluates the potential effects of UC Merced based on the most current LRDP, similarly concludes that implementation of the LRDP would result in less-than-significant impacts to hazards due to design features or incompatible uses. Additionally, as detailed in the 2020 LRDP SEIR, the LRDP does not propose any infrastructure changes outside the campus, and on-campus infrastructure changes would be constructed according to State of California design standards, which have been developed to minimize safety issues (UC Merced 2019).

Thus, annexation of the UC Merced campus would not result in any new impacts or substantially increase the severity of impacts related to transportation hazards, as evaluated in the GP PEIR. Therefore, the findings of the GP PEIR regarding hazards due to a geometric design feature or incompatible uses remain valid and no new mitigation is required. This impact would remain less than significant.

d) Result in inadequate emergency access?

Page 3.15-31 of the GP PEIR discusses the potential for General Plan implementation to result in inadequate emergency access (Impact #3.15-4). The GP PEIR determined that the 2030 General Plan Circulation Plan and Policies promote emergency vehicle access to all portions of the City and plan area (which includes the UC Merced campus). Additionally, the GP PEIR determined that the roadway improvement standards adopted by the City of Merced provide for adequate street width and secondary access to ensure that emergency vehicles have adequate access to development throughout the plan area. Therefore, the GP PEIR concluded that the implementation of the 2030 General Plan would not result in inadequate emergency access; therefore, this impact would be less than significant.

The GP PEIR includes the UC Merced campus within the SUDP/SOI; thus, it is assumed that the associated emergency access impact analysis was considered as part of the analysis. The 2020 LRDP SEIR, which evaluates the potential effects of UC Merced based on the most current LRDP, similarly concludes that implementation of the LRDP would result in less-than-significant impacts to emergency access. Additionally, as detailed in the 2020 LRDP SEIR, the LRDP does not propose any changes to infrastructure outside the campus and on-campus infrastructure changes would be constructed according to State of California design standards.

Therefore, annexation of the UC Merced campus would not result in any new impacts or substantially increase the severity of impacts related to emergency access, as evaluated in the GP PEIR. Therefore, the findings of the GP PEIR regarding emergency access remain valid and no new mitigation is required. This impact would remain less than significant.

3.19.3 Mitigation Measures

No applicable mitigation measures for transportation were proposed in the GP PEIR. No new mitigation measures are required.

3.19.4 Conclusion

There are no significant impacts that are peculiar to the project. No new impacts have occurred nor has any new information been found requiring new analysis or verification. The project would not have any potentially significant impacts or cumulative impacts that were not discussed in the GP PEIR. Therefore, the conclusions of the GP PEIR remain valid and approval of the project would not require additional environmental review.

3.20 TRIBAL CULTURAL RESOURCES

ENVIRONMENTAL ISSUES	Impact Examined in GP PEIR?	Could Annexation Result in a New or Substantially More Severe Impact?*	Are there Changes in Circumstance or New Information Available that Could Result in a Substantially More Severe Impact?	Do Mitigation Measures and/or Design Features Address/Resolve Impacts, Including Impacts That Would Otherwise be New or Substantially More Severe?
Has a California Native American Tribe requested consultation in accordance with Public Resources Code section 21080.3.1(b)?				
Would the project cause a substantial adverse change in the significance of a tribal cultural resource, defined in Public Resources Code section 21074 as either a site, feature, place, cultural landscape that is geographically defined in terms of the size and scope of the landscape, sacred place, or object with cultural value to a California Native American tribe, and that is:				
a) Listed or eligible for listing in the California Register of Historical Resources, or in a local register of historical resources as defined in Public Resources Code section 5020.1(k)?	Not Analyzed	No	No	N/A
b) A resource determined by the lead agency, in its discretion and supported by substantial evidence, to be significant pursuant to criteria set forth in subdivision (c) of Public Resources Code Section 5024.1. In applying the criteria set forth in subdivision (c) of Public Resource Code Section 5024.1, the lead agency shall consider the significance of the resource to a California Native American tribe?	Not Analyzed	No	No	Yes

*Determination does not factor implementation of previously adopted mitigation.

3.20.1 Environmental Setting

AB 52 (Chapter 532, Statutes of 2014) established a formal consultation process for California Native American tribes as part of CEQA and equates significant impacts on tribal cultural resources with significant environmental impacts (Public Resources Code Section 21084.2). AB 52 consultation requirements went into effect on July 1, 2015, for all projects that had not already published a Notice of Intent to Adopt a Negative Declaration or Mitigated Negative Declaration, or published a Notice of Preparation of an Environmental Impact Report prior to that date (Section 11 [c]). Specifically, AB 52 requires that “prior to the release of a negative declaration, mitigated negative declaration, or environmental impact report for a project, the lead agency shall begin consultation” (21808.3.1 [a]), and that “the lead agency may certify an environmental impact report or adopt a mitigated negative declaration for a project with a significant impact on an identified tribal cultural resource only if” consultation is formally concluded (21082.3[d]).

However, in the case of the current project, the lead agency has prepared this addendum to the previously certified GP PEIR, in accordance with Section 15164 of the CEQA Guidelines. An addendum was determined to be the most appropriate document because none of the conditions described in Section 15162, calling for preparation of a subsequent EIR, have occurred. The addendum addresses minor technical changes or additions and confirms that the project is consistent with what was previously analyzed under the GP PEIR. As such, the addendum will not result in an additional certification; therefore, the AB 52 procedures specified in Public Resources Code Sections 21080.3. 1(d) and 21080.3.2 do not apply and no tribal consultation under AB 52 is required.

3.20.2 Discussion

Would the project cause a substantial adverse change in the significance of a tribal cultural resource, defined in Public Resources Code section 21074 as either a site, feature, place, cultural landscape that is geographically defined in terms of the size and scope of the landscape, sacred place, or object with cultural value to a California Native American tribe, and that is:

- a) Listed or eligible for listing in the California Register of Historical Resources, or in a local register of historical resources as defined in Public Resources Code section 5020.1(k)?**

This topic is addressed in Section 3.20.2(b) below.

- b) A resource determined by the lead agency, in its discretion and supported by substantial evidence, to be significant pursuant to criteria set forth in subdivision (c) of Public Resources Code Section 5024.1. In applying the criteria set forth in subdivision (c) of Public Resource Code Section 5024.1, the lead agency shall consider the significance of the resource to a California Native American tribe?**

Because tribal cultural resources were not a resource under CEQA until 2015, the GP PEIR did not evaluate the potential for implementation of the General Plan to result in impacts on tribal cultural resources.

The 2020 LRDP SEIR evaluates the potential for implementation of the 2020 LRDP to cause a substantial adverse change in the significance of a tribal cultural resource. In accordance with AB 52, UC Merced contacted the eight tribes traditionally associated with the 2020 LRDP planning area and did not receive any requests for formal consultation. No known prehistoric sites have been documented within the planning area and no cultural resources have been encountered during past development of the UC Merced campus. Therefore, the 2020 LRDP planning area is not expected to contain tribal cultural resources (UC Merced 2019). Furthermore, the cultural resources mitigation measures (MM CUL-2 and MM CUL-3) adopted for the 2009 LRDP would apply to the new facilities proposed in the 2020 LRDP. As discussed in Section 3.7, this mitigation commits UC Merced to formally evaluate previously evaluated historic resources for CRHR eligibility, and if eligible, develop and implement a Historic Properties Treatment Plan. In

addition, this mitigation commits UC Merced and its contractors to follow specific protocols in the event that buried cultural resources are encountered during construction activities (UC Merced 2009). Therefore, development of the UC Merced campus in accordance with the 2020 LRDP would not cause a substantial adverse change in the significance of a tribal cultural resource; this impact would be less than significant and would not result in a cumulatively considerable contribution to a cumulative impact on tribal cultural resources.

Based on the above discussion, annexation of the UC Merced campus would not result in any new significant impacts on tribal cultural resources and no mitigation is required.

3.20.3 Mitigation Measures

No mitigation measures for tribal cultural resources were proposed in the GP PEIR. 2009 LRDP EIR Mitigation Measures MM CUL-2 and MM CUL-3 (see Appendix B) commit UC Merced and its contractors to follow specific protocols in the event that buried cultural resources are encountered during construction activities. No new mitigation measures are required.

3.20.4 Conclusion

There are no significant impacts that are peculiar to the project. No new impacts have occurred nor has any new information been found requiring new analysis or verification. The project would not have any potentially significant impacts or cumulative impacts that were not discussed in the GP PEIR. Therefore, the conclusions of the GP PEIR remain valid and approval of the project would not require additional environmental review.

3.21 UTILITIES AND SERVICE SYSTEMS

ENVIRONMENTAL ISSUES	Impact Examined in GP PEIR?	Could Annexation Result in a New or Substantially More Severe Impact?*	Are there Changes in Circumstance or New Information Available that Could Result in a Substantially More Severe Impact?	Do Mitigation Measures and/or Design Features Address/Resolve Impacts, Including Impacts That Would Otherwise be New or Substantially More Severe?
Would the project:				
a) Require or result in the relocation or construction of construction of new or expanded water, wastewater treatment or stormwater drainage, electric power, natural gas, or telecommunication facilities, the construction or relocation of which could cause significant environmental effects?	Impact #3.16-2: The proposed project would require or result in the construction of new water or wastewater treatment facilities or expansion of existing facilities, the construction of which could cause significant effects, pp. 3.16-8 and 3.16-9 Impact #3.16-3: The proposed project would require or result in the construction of new storm water drainage facilities or expansion of existing facilities, the construction of which could cause significant environmental effects, pp. 3.16-10 to 3.16-11	No	No	N/A
b) Have insufficient water supplies available to serve the project and reasonably foreseeable future development during normal, dry and multiple dry years?	Impact #3.16-4: The proposed project would require new or expanded water supply entitlements, pp. 3.16-11 to 3.16-13	No	No	N/A
c) Result in a determination by the wastewater treatment provider that serves or may serve the project that it has inadequate capacity to serve the project's projected demand, in addition to the provider's existing commitments?	Impact #3.16-5: Result in a determination by the wastewater treatment provider which serves or may serve the project that it has adequate capacity to serve the project's projected demand in addition to the provider's existing commitments, pp. 3.16-13 to 3.16-15	No	No	N/A
d) Generate solid waste in excess of State or local standards, or in excess of the capacity of local infrastructure, or otherwise impair the attainment of solid waste reduction goals?	Impact #3.16-6: The proposed project would increase demand for solid waste disposal services, pp. 3.16-15 and 3.16-16	No	No	N/A

ENVIRONMENTAL ISSUES	Impact Examined in GP PEIR?	Could Annexation Result in a New or Substantially More Severe Impact?*	Are there Changes in Circumstance or New Information Available that Could Result in a Substantially More Severe Impact?	Do Mitigation Measures and/or Design Features Address/Resolve Impacts, Including Impacts That Would Otherwise be New or Substantially More Severe?
e) Fail to comply with federal, state, and local management and reduction statutes and regulations related to solid waste?	Impact #3.16-7: Will the proposed project comply with federal, state, and local statutes and regulations related to solid waste?, pp. 3.16-16	No	No	N/A

*Determination does not factor implementation of previously adopted mitigation.

3.21.1 Environmental Setting

The GP PEIR describes water supply, wastewater treatment, storm drainage, and solid waste. Applicable federal, State, and local regulations are also explained. No substantial change in the environmental setting described in the GP PEIR Section 3.16, "Utilities/Services," has occurred since certification of the GP PEIR. Relevant regulations and planning documents adopted subsequent to publication of the GP PEIR are described below.

WATER

The City of Merced's 2020 UWMP was adopted in August of 2021. The population forecasts used in the 2020 UWMP include the forecasted population for UC Merced based on the 2020 LRDP, 2020 LRDP SEIR, and UC Merced Tomorrow Long Range Development Plan. In 2020, the City supplied 20,076 acre-feet (AF) of potable water and 4,050 AF of recycled water. Potable water demands are projected to increase to 31,825 AF by 2040 due to increases in the City and UC Merced population. The City's water supply is projected to sufficiently meet expected demands through 2040 through the installation of additional groundwater wells and construction of a 10 million mgd surface water treatment plant. The surface water treatment plant is projected to use surface water supplied by Merced Irrigation District and begin operation by 2030 (City of Merced 2021).

WASTEWATER AND STORMWATER

Since adoption of the GP PEIR, the City of Merced released a Wastewater Collection System Master Plan in December 2017. This plan assesses the capacity of the existing sewer system to serve the City's wastewater collection needs, as well as provides recommendations to address existing sewer system deficiencies and to serve the growth envisioned in the City's General Plan. This plan accounts for flows anticipated from development of the UC Merced campus in accordance with the 2009 LRDP, which would generate approximately 1.13 million gallons per day (Mgal/d) during dry weather flows and 2.54 Mgal/d during peak wet weather flows (City of Merced 2017).

The City has not released a new master plan for stormwater drainage since adoption of the GP PEIR. The most recent Storm Drain Master Plan, released in April 2002, was developed to facilitate the planning and implementation of drainage infrastructure improvements needed to accommodate stormwater runoff under buildout conditions in the City's 2015 General Plan (City of Merced 2002).

ENERGY

As described in Section 3.8, "Energy," the State has increased the standards for building energy and vehicle fuel efficiency since adoption of the GP PEIR.

SOLID WASTE

Since adoption of the GP PEIR, additional laws and regulations have been passed that set forth more stringent solid waste reduction goals, including AB 341 of 2012, which increases California's waste diversion goal from 50 percent under AB 939 of 1989 to 75 percent by 2020.

3.21.2 Discussion

- a) **Require or result in the relocation or construction of construction of new or expanded water, wastewater treatment or stormwater drainage, electric power, natural gas, or telecommunication facilities, the construction or relocation of which could cause significant environmental effects?**

Pages 3.16-8 and 3.16-9 of the GP PEIR discuss the potential for General Plan implementation to result in significant environmental effects from the relocation or construction of new or expanded water and wastewater treatment facilities (Impact #3.16-2). As discussed in the GP PEIR, future development would require new water supply and wastewater treatment facilities. However, project-level CEQA environmental review would be needed to determine the extent of environmental impacts and identify relevant mitigation measures, if warranted. The General Plan includes several policies and standards designed to address environmental impacts associated with the development of new water conveyance and wastewater treatment facilities (UE-1.2 of the Urban Expansion Element, OS-5.1 of the Open Space Element, and P-1.3 and P-3.1 of the Public Services and Facilities Element). In addition, the City has adopted BMPs designed to reduce water consumption and waste. Furthermore, the environmental impacts from expansion of the wastewater treatment plant were evaluated and mitigation was identified as part of a separate project. Therefore, the GP PEIR concluded that impacts related to the relocation, construction, or expansion of water and wastewater treatment facilities would be less than significant, and no significant cumulative impacts were identified (City of Merced 2010).

Pages 3.16-10 and 3.16-11 of the GP PEIR discuss the potential for General Plan implementation to result in significant environmental effects from the relocation or construction of new or expanded stormwater drainage facilities (Impact #3.16-3). As discussed in the GP PEIR, future development can result in increased runoff, requiring the need for on- or off-site flood control facilities. General Plan policies would ensure that new development is designed based on site-specific drainage conditions, provides or pays impact fees toward public infrastructure improvements, and complies with the City's Storm Water Master Plan (Policy P-1.3, P-5.1, and P-5.2 of the Public Services and Facilities Element). Therefore, the GP PEIR concluded that impacts related to the relocation, construction, or expansion of stormwater drainage facilities would be less than significant, and no significant cumulative impacts were identified (City of Merced 2010).

Annexation of UC Merced would not result in new environmental effects from construction of utility infrastructure. The City currently provides water service to UC Merced. Wastewater generated on the campus is currently conveyed to the City's WWTP for treatment and disposal. As noted above, infrastructure required to serve buildout of the UC Merced campus is in place or currently planned through established pre-annexation agreements.

The GP PEIR evaluated the effects of utility extensions required to serve the UC Merced population anticipated in the 2009 LRDP. As evaluated in the certified 2020 LRDP SEIR, the campus' water demand in 2030 is expected be substantially lower than anticipated in the 2009 LRDP and the existing water main and well are expected to be adequate to serve the campus through 2030 (UC Merced 2019).

With respect to the effect of the campus development on treatment capacity at the City's WWTP, the GP PEIR was based on the 2009 LRDP EIR analysis, which showed that the campus would generate 1.13 mgd of wastewater at full development. The 2020 LRDP SEIR indicates that per capita water use and total population are now understood to be less than assumed in the 2009 LRDP EIR. According to this analysis, the campus would generate an additional 0.10 mgd with the addition of 6,700 students, faculty, and staff between 2020 and 2030. Total wastewater generation

would be 0.27 mgd by 2030. This is substantially lower than 1.13 mgd estimated and analyzed in the 2009 LRDP EIR (UC Merced 2019).

Although there would be a substantially lower flow from the campus than previously projected, the 2020 LRDP SEIR determined that the existing sewer line on G Street in the City of Merced would not be adequate to handle campus flows through 2030. A new line or an upgrade to the existing line on G Street would be needed (UC Merced 2019). These improvements would likely take place within roadway shoulders or under the pavement consistent with current City practice and are identified in the 2017 Draft Sewer Master Plan developed by the City. As described above, the General Plan includes several policies and standards designed to address environmental impacts associated with the development of new water conveyance and wastewater treatment facilities. The offsite improvements to the G Street trunk line are within the scope of the utility expansions evaluated in the GP PEIR.

Since certification of the 2020 LRDP SEIR, the City released a draft Wastewater Collection System Master Plan, which sets forth various improvements that may be required throughout the City. Although the draft report indicates that the available capacity of the G Street trunk is not sufficient to convey flow from the entitled properties expected to utilize this facility and recommends that G Street trunk main be upgraded to a 24-inch diameter pipe between Bellevue Road and Cardella Road, the City is currently reevaluating the plan and anticipates that the scope of the identified improvements may be reduced. Furthermore, because the GP EIR evaluated the physical effects of utility extensions within the SOI, new or substantially more severe impacts would not occur.

In compliance with the UC Policy on Sustainable Practices, power that will be needed by the campus at buildout will be obtained from a number of renewable and alternative technologies, including wind turbines, fuel cells, and photovoltaic systems. In light of the lower estimated demand for electricity in 2030 and the campus initiatives to obtain electricity from on-site renewal sources, no off-site improvements such as additional transmission lines would be required. Similarly, no off-site improvements to provide natural gas to the campus would be required (UC Merced 2019). Furthermore, development of the UC Merced campus would comply with the various plans, policies, and regulations to conserve and reduce demand for water and energy resources (UC Merced 2019).

Based on the above discussion, annexation of the UC Merced campus would not result in any new impacts from the relocation, construction, or expansion of utility infrastructure. Therefore, the findings of the GP PEIR regarding utility infrastructure remain valid and no new mitigation is required. This impact would remain less than significant.

b) Have insufficient water supplies available to serve the project and reasonably foreseeable future development during normal, dry and multiple dry years?

Pages 3.16-11 to 3.16-13 of the GP PEIR discuss whether there would be sufficient water supplies to serve General Plan implementation (Impact #3.16-4). As described in the GP PEIR, there are sufficient water resources to meet the water demands of General Plan buildout, but the use of groundwater resources would result in a depletion of groundwater reserves and decline in the groundwater levels. The City implements BMPs for water conservation, as listed in the City's Urban Water Management Plan. In addition, General Plan policies would ensure that adequate water supply and distribution facilities are developed to accommodate growth in the planning area (Policies P-3.1 and P-3.2 of the Public Services and Facilities Element). Because no new or expanded water entitlements would be required, the GP PEIR concluded that impacts related to sufficient water supplies would be less than significant, and no significant cumulative impacts were identified (City of Merced 2010).

The City currently provides water to UC Merced pursuant to a pre-annexation agreement. The water demand associated with development in accordance with the 2020 LRDP was accounted for in the City's 2020 UWMP, which concluded that adequate groundwater supply was available to meet water demands in the service area during normal, single-dry, and multiple-dry years. The GSP indicates that agricultural and urban groundwater demand in the Merced Subbasin would need to be reduced by approximately 10 percent in order to balance out the change in groundwater storage over a long-term average condition. UC Merced has implemented projects (including advanced irrigation systems and reduced irrigation, planting drought resistant species, altering condenser plant operations, and a system for reporting water leaks) to reduce water use in an effort to achieve water neutrality and has reduced water

demand by more than 10 percent (UC Merced 2019). Annexation of the UC Merced campus would not affect the existing supply or demand for water in the City's existing service area.

Based on the above discussion, annexation of the UC Merced campus would not result in any new impacts. Therefore, the findings of the GP PEIR regarding sufficient water supplies remain valid and no new mitigation is required. This impact would remain less than significant.

c) Result in a determination by the wastewater treatment provider that serves or may serve the project that it has inadequate capacity to serve the project's projected demand, in addition to the provider's existing commitments?

Pages 3.16-13 to 3.16-15 of the GP PEIR discuss the potential for General Plan implementation to result in a wastewater treatment demand that exceeds the provider's capacity (Impact #3.16-5). As described in the GP PEIR, the existing wastewater collection system in the City did not have adequate capacity to handle wastewater flows from General Plan buildout. The City was in the process of expanding the existing wastewater treatment plant and developed a Sewer Collection Master Plan, which identified additional improvements to the wastewater treatment system that were needed to accommodate future development in the planning area. General Plan policies would ensure that the City provides for an adequate wastewater collection, treatment, and disposal system to meet future needs and that new developments pay their fair share of public facility and infrastructure improvements (Policies P-1.2, P-1.3, P-4.1, and P-4.2 of the Public Services and Facilities Element). Therefore, the GP PEIR concluded that impacts related to wastewater treatment would be less than significant, and no significant cumulative impacts were identified (City of Merced 2010).

The City currently provides wastewater treatment to UC Merced pursuant to a pre-annexation agreement (Merced County 2012). The GP PEIR evaluated the development and annexation of the UC Merced campus, as proposed in the 2009 LRDP. Therefore, impacts related to wastewater treatment from development of the UC Merced campus in accordance with the 2009 LRDP are consistent with the impacts from implementation of the GP PEIR, described above.

The 2020 LRDP is the current planning document for development of the UC Merced campus. Because UC Merced is projected to grow at a slower pace than previously anticipated, development of the UC Merced campus in accordance with the 2020 LRDP would not increase wastewater flows beyond those anticipated for the 2009 LRDP. In addition, the 2020 LRDP SEIR determined that the existing wastewater treatment plant would have adequate capacity to serve the wastewater treatment demands of the campus, even when accounting for increases in flows from other sources (UC Merced 2019). Annexation of the UC Merced campus would not affect the demand for wastewater treatment in the City's existing service area.

Based on the above discussion, annexation of the UC Merced campus would not result in any new impacts related to wastewater treatment. Therefore, the findings of the GP PEIR regarding wastewater treatment remain valid and no new mitigation is required. This impact would remain less than significant.

d) Generate solid waste in excess of State or local standards, or in excess of the capacity of local infrastructure, or otherwise impair the attainment of solid waste reduction goals?

This topic is addressed in Section 3.21.2(e) below.

e) Fail to comply with federal, state, and local management and reduction statutes and regulations related to solid waste?

Pages 3.16-15 and 3.16-16 of the GP PEIR discuss the potential for General Plan implementation to increase demand for solid waste disposal services (Impact #3.16-6) and conflict with federal, State, and local statutes and regulations related to solid waste (Impact #3.16-7). As described in the GP PEIR, the Merced County Highway 99 Landfill has available capacity to serve General Plan buildout. The City complies with all statutes and regulations related to solid waste, including diversion of solid waste from local landfills in compliance with AB 939. General Plan policies would

ensure that the City implements programs to reduce the amount of solid waste generated and increase recycling efforts in the City (Policies P-6.1 and P-6.2 of the Public Services and Facilities Element). Therefore, the GP PEIR concluded that impacts related to solid waste would be less than significant, and no significant cumulative impacts were identified (City of Merced 2010).

Annexation of UC Merced would not increase the generation of solid waste disposal in the existing service area. The GP PEIR evaluated the development and annexation of the UC Merced campus, as proposed in the 2009 LRDP. Therefore, impacts related to solid waste from development of the UC Merced campus in accordance with the 2009 LRDP are consistent with the impacts from implementation of the GP PEIR, described above.

The 2020 LRDP is the current planning document for development of the UC Merced campus. Because UC Merced is projected to grow at a slower pace than previously anticipated, development of the UC Merced campus in accordance with the 2020 LRDP would not increase campus generated solid waste when compared to the 2009 LRDP. In addition, the LRDP EIR determined that the Merced County Highway 59 Landfill would have adequate capacity to serve development of the campus in accordance with the 2020 LRDP. Furthermore, UC Merced has committed to improving recycling and reuse programs to work towards meeting UC Sustainable Practices Policy goal for achieving zero waste (UC Merced 2019). These programs, including the 2020 Zero Waste Plan, would reduce effects compared to the assumptions in the 2009 LRDP EIR, as evaluated in the GP PEIR.

Based on the above discussion, annexation of the UC Merced campus would not result in any new impacts related to solid waste. Therefore, the findings of the GP PEIR regarding solid waste remain valid and no new mitigation is required. This impact would remain less than significant.

3.21.3 Mitigation Measures

No mitigation measures for utilities and service systems were proposed in the GP PEIR. No new mitigation measures are required.

3.21.4 Conclusion

There are no significant impacts that are peculiar to the project. No new impacts have occurred nor has any new information been found requiring new analysis or verification. The project would not have any potentially significant impacts or cumulative impacts that were not discussed in the GP PEIR. Therefore, the conclusions of the GP PEIR remain valid and approval of the project would not require additional environmental review.

3.22 WILDFIRE

ENVIRONMENTAL ISSUES	Impact Examined in GP PEIR?	Could Annexation Result in a New or Substantially More Severe Impact?*	Are there Changes in Circumstance or New Information Available that Could Result in a Substantially More Severe Impact?	Do Mitigation Measures and/or Design Features Address/Resolve Impacts, Including Impacts That Would Otherwise be New or Substantially More Severe?
Is the project located in or near state responsibility areas or lands classified as high fire hazard severity zones? If located in or near state responsibility areas or lands classified as very high fire hazard severity zones, would the project:	The northeast portion of the planning area that is east of Le Grand Canal is identified as a moderate FHSZ within an SRA.			
a) Substantially impair an adopted emergency response plan or emergency evacuation plan?	Impact #3.7-6: Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan, p. 3.7-13	No	No	N/A
b) Due to slope, prevailing winds, and other factors, exacerbate wildfire risks, and thereby expose project occupants to pollutant concentrations from a wildfire or the uncontrolled spread of a wildfire?	Not Analyzed	No	No	N/A
c) Require the installation of associated infrastructure (such as roads, fuel breaks, emergency water sources, power lines or other utilities) that may exacerbate fire risk or that may result in temporary or ongoing impacts to the environment?	Not Analyzed	No	No	N/A
d) Expose people or structures to significant risks, including downslope or downstream flooding or landslides, as a result of runoff, post-fire slope instability, or drainage changes?	Not Analyzed	No	No	N/A

*Determination does not factor implementation of previously adopted mitigation.

3.22.1 Environmental Setting

This resource section reflects the updated State CEQA Guidelines that became effective on December 28, 2018, after the GP PEIR was certified. As provided in CEQA Guidelines Section 15007, “amendments to the guidelines apply prospectively only.” CEQA documents must meet the “content requirements in effect when the document was set out for public review,” and “shall not need to be revised to conform to any new content requirements in guideline amendments taking effect before the document is finally approved.”

As directed by Section 15007, the GP PEIR does not need to be revised to conform to the new wildfire requirements. Information was known about the effect of wildfire on the environment at the time the GP PEIR was prepared and, thus, it could have been evaluated. In addition, the change in the State CEQA Guidelines does not constitute new significant information under CEQA (State CEQA Guidelines 15162), as it does not constitute a new impact caused by the changes proposed in the project.

The following thresholds are specific to areas within or near State Responsibility Areas (SRAs) or Local Responsibility Areas (LRAs) classified as Very High Fire Hazard Severity Zones (FHSZ). An SRA is an area where the State is financially responsible for the prevention and suppression of wildfires. Alternatively, an LRA is an area in which local governments or fire districts, rather than the State, are responsible for fire prevention and suppression. CAL FIRE creates Fire Hazard Severity Zone maps for areas within the SRA and prepares recommended Fire Hazard Severity Zone maps for areas within the LRA. Hazard ratings range from Moderate to Very High and are based on the physical conditions that contribute to the likelihood that an area will burn over a 30- to 50-year period.

The majority of the 2020 LRDP planning area is within an LRA, with the area north of Bellevue Road designated as a LRA moderate FHSZ. The northeast portion of the planning area that is east of Le Grand Canal is identified as a moderate FHSZ within an SRA (CAL FIRE 2007). The Merced County Fire Department provides primary response services to the LRA and offers mutual automatic aid with CAL FIRE to many of the rural foothill and rangeland areas.

Eastern portions of Merced County were recently evacuated in response to the SCU Lightning Complex Fire, which began on August 18, 2020 and spanned multiple locations throughout Santa Clara County, Alameda County, Contra Costa County, San Joaquin County, Merced County, and Stanislaus County. The fire burned 396,624 acres and was contained on October 1, 2020 (CAL FIRE 2020). The SCU Lightning Complex Fire occurred over 50 miles southwest of the area proposed for annexation. No recent fire events have occurred within or near the annexation area.

3.22.2 Discussion

a) Substantially impair an adopted emergency response plan or emergency evacuation plan?

Refer to Section 3.11.2(f). As discussed in Section 3.11, “Hazards and Hazardous Materials,” above, annexation of the UC Merced campus would not result in any new impacts on emergency response and evacuation plans. Specifically, the 2020 LRDP would be subject to the same emergency response and evacuation plans and procedures as those assumed in the GP PEIR, including the UC Merced Emergency Operations Plan and Crisis Communications Plan. Furthermore, safety planning documents would continue to be prepared and updated in accordance with applicable regulations, including California Health and Safety Code Section 25517.5. Therefore, the findings of the GP PEIR regarding emergency response and evacuation plans remain valid and no new mitigation is required. This impact would remain less than significant.

b) Due to slope, prevailing winds, and other factors, exacerbate wildfire risks, and thereby expose project occupants to pollutant concentrations from a wildfire or the uncontrolled spread of a wildfire?

The GP PEIR does not specifically evaluate the potential for implementation of the General Plan to expose project occupants to pollutant concentrations from a wildfire or the uncontrolled spread of a wildfire. However, as discussed in Section 3.11.2(g), annexation of the UC Merced campus would not result in any new impacts. Specifically, the 2020

LRDP planning area would be subject to the same fire risk as the 2009 LRDP planning area evaluated in the GP PEIR. In addition, the 2020 LRDP would be subject to the same standards and management practices for fire protection and prevention. Annexation would not exacerbate wildfire risks. Therefore, annexation of the UC Merced campus would not result in any new impacts related to exposing project occupants to pollutant concentrations from a wildfire or the uncontrolled spread of a wildfire.

c) Require the installation of associated infrastructure (such as roads, fuel breaks, emergency water sources, power lines or other utilities) that may exacerbate fire risk or that may result in temporary or ongoing impacts to the environment?

The GP PEIR does not specifically evaluate the potential for implementation of the General Plan to exacerbate fire risk from the installation of infrastructure. However, there have not been any changes to the infrastructure proposed to support development of the campus since the 2009 LRDP. Annexation would not require the installation of new infrastructure. Therefore, annexation of the UC Merced campus would not result in any new impacts related to the exacerbation of fire risk from the installation of infrastructure.

d) Expose people or structures to significant risks, including downslope or downstream flooding or landslides, as a result of runoff, post-fire slope instability, or drainage changes?

The GP PEIR does not specifically evaluate the potential for implementation of the General Plan to expose people or structures to significant post-fire risks. However, the 2020 LRDP does not include any changes to the 2009 LRDP that would expose people and structures to new fire post-fire risks. Specifically, the revised LRDP would not place new structures in areas susceptible to flooding or landslides (refer to Section 3.9, "Geology and Soils," and Section 3.12, "Hydrology and Water Quality" for additional information about geologic and flood hazards) and would not increase the potential for wildfire (see 3.11, "Hazards and Hazardous Materials"). Therefore, annexation of the UC Merced campus would not result in any new impacts related to post-fire risks such as downslope flooding or landslides.

3.22.3 Mitigation Measures

No mitigation measures for wildfire were proposed in the GP PEIR and no new mitigation measures are required.

3.22.4 Conclusion

There are no significant impacts that are peculiar to the project. No new impacts have occurred nor has any new information been found requiring new analysis or verification. The project would not have any potentially significant impacts or cumulative impacts that were not discussed in the GP PEIR. Therefore, the conclusions of the GP PEIR remain valid and approval of the project would not require additional environmental review.

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Appendix A

Summary of Mitigation Measures
in the 2020 LRDP SEIR

LRDP MM AQ-1a: The construction contractors shall be required via contract specifications to use construction equipment rated by the U.S. EPA as meeting Tier 4 (model year 2008 or newer) emission limits for engines between 50 and 750 horsepower.

LRDP MM AQ-1b: UC Merced shall include in all construction contracts the measures specified in SJVAPCD Regulation VIII (as it may be amended for application to all construction projects generally) to reduce fugitive dust impacts, including but not limited to the following:

- All disturbed areas, including storage piles, which are not being actively utilized for construction purpose, shall be effectively stabilized of dust emissions using water, chemical stabilizer/suppressant, or vegetative ground cover.
- All on-site unpaved roads and off-site unpaved access roads shall be effectively stabilized of dust emissions using water or chemical stabilizer/suppressant.
- All land clearing, grubbing, scraping, excavation, land leveling, grading, cut and fill, and demolition activities shall be effectively controlled of fugitive dust emissions using application of water or by presoaking.
- When materials are transported off-site, all material shall be covered, effectively wetted to limit visible dust emissions, or at least 6 inches of freeboard space from the top of the container shall be maintained.
- All operations shall limit or expeditiously remove the accumulation of mud or dirt from adjacent public streets at least once every 24 hours when operations are occurring. (The use of dry rotary brushes is expressly prohibited except where preceded or accompanied by sufficient wetting to limit visible dust emissions. Use of blower devices is expressly forbidden.)
- Following the addition of materials to, or the removal of materials from, the surface of outdoor storage piles, storage piles shall be effectively stabilized of fugitive dust emissions by using sufficient water or chemical stabilizer/ suppressant.

LRDP MM AQ-2a: UC Merced shall implement the following measures to reduce emissions from vehicles:

- Provide pedestrian-enhancing infrastructure to encourage pedestrian activity and discourage vehicle use.
- Provide bicycle facilities to encourage bicycle use instead of driving, such as bicycle parking, bicycle lanes, bicycle lockers; and showers and changing facilities for employees.
- Provide preferential carpool and vanpool parking for non-residential uses.
- Provide transit-enhancing infrastructure to promote the use of public transportation, such as covered bus stops and information kiosks.
- Provide facilities, such as electric car charging stations and a CNG refueling station, to encourage the use of alternative-fuel vehicles.
- Improve traffic flows and congestion by timing of traffic signals at intersections adjacent to the campus to facilitate uninterrupted travel.
- Work with campus transit provider to replace CatTracks buses with either electric buses or buses operated on alternative fuels.
- Work with the City of Merced to establish park and ride lots and provide enhanced transit service between the park and ride lots and the campus.
- Replace campus fleet vehicles with electric vehicles or vehicles that operate on alternative fuels.
- Reduce the number of daily vehicle trips by providing more housing on campus.

LRDP MM AQ-2b: UC Merced shall implement the following measures to reduce emissions from area and energy sources, as feasible:

- Utilize low-VOC cleaning supplies and low-VOC paints (100 grams/liter or less) in building maintenance.
- Utilize electric equipment for landscape maintenance.
- Plant low maintenance landscaping.

- Implement a public information program for resident students to minimize the use of personal consumer products that result in ROG emissions, including information on alternate products.
- Instead of natural gas water heaters, install solar water heating systems.

LRDP MM BIO-4: A qualified wildlife biologist shall conduct visual surveys of the development area during the flight season for the Crotch bumble bee (late February through late October). Between two and four evenly spaced surveys shall be conducted for the highest detection probability, including surveys in early spring (late March/early April) and early summer (late June/July). Surveys shall take place when temperatures are above 60°F, preferably on sunny days with low wind speeds (e.g., less than 8 miles per hour) and at least 2 hours after sunrise and 3 hours before sunset. On warm days (e.g., over 85°F), bumble bees will be more active in the mornings and evenings. Surveyors shall conduct transect surveys focusing on detection of foraging bumble bees and underground nests using visual aids such as butterfly binoculars. If no Crotch bumble bees or potential Crotch bumble bees are detected, no further mitigation is required.

If Crotch bumble bees or potential Crotch bumble bees are observed within the development area, a plan to protect Crotch bumble bee nests and individuals shall be developed and implemented in consultation with CDFW. The plan shall include, but not be limited to, the following measures:

- Specifications for construction timing and sequencing requirements (e.g., avoidance of raking, mowing, tilling, or other ground disturbance until late March to protect overwintering queens);
- Preconstruction surveys conducted within 30 days and consistent with any current available CDFW standards prior to the start of ground disturbing activities to identify active nests;
- Establishment of appropriate no-disturbance buffers for nest sites and construction monitoring by a qualified biologist to ensure compliance;
- Restrictions associated with construction practices, equipment, or materials that may harm bumble bees (e.g., avoidance of pesticides/herbicides, BMPs to minimize the spread of invasive plant species);
- Provisions to avoid Crotch bumble bees or potential Crotch bumble bees if observed away from a nest during project activity (e.g., ceasing of project activities until the animal has left the work area on its own volition); and
- Prescription of an appropriate restoration seed mix targeted for the Crotch bumble bee, including native plant species known to be visited by native bumble bee species and containing a mix of flowering plant species with continual floral availability through the entire active season of the Crotch bumble bee (March to October).

LRDP MM BIO-9a: Avoid and minimize impacts on native birds protected under the MBTA, including listed species, fully protected species, special-status species of concern, and raptors and passerines.

- (a) Limit ground disturbance activities to the non-breeding season and remove potential unoccupied breeding habitat during the non-breeding season if possible. If breeding season work is required, conduct take avoidance (tree, shrub, and ground) nest surveys to identify and avoid active nests.
 - If feasible, UC Merced shall conduct all project-related activities including (but not limited to) tree and shrub removal, other vegetation clearing, grading, or other ground disturbing activities during the non-breeding season (typically between September 16 and February 14).
 - If activities are scheduled to occur during the breeding season (typically between February 15 through September 15), applicable CDFW and/or USFWS permit conditions in the permits issued to the University related to bird surveys must be followed. In addition, a UC Merced-approved qualified avian biologist, with knowledge of the species to be surveyed, shall conduct focused nesting surveys within 15 days prior to the start of project or ground-disturbing activities and within the appropriate habitat. The qualified avian biologist shall determine the exact survey duration and location (typically 500 feet around the work area) based on the work conditions and shall take into account existing applicable CDFW or USFWS permit conditions.

- If an unoccupied nest (without birds or eggs) of a non-listed or fully protected species (as determined by the qualified avian biologist) is found, the nest shall be removed under the direction of the qualified avian biologist.
- If an active nest is located, a qualified avian biologist shall establish an appropriate no-disturbance buffer around the nest making sure that any buffer width required by the University's permit obligations is followed. A 500-foot buffer is recommended for listed or fully protected nesting birds (or another buffer determined in consultation with CDFW and/or USFWS), a 250-foot buffer around raptors, and a 75-foot buffer around passerines. If work activities cause or contribute to a bird being flushed from a nest, the buffer width shall be adjusted to avoid and minimize impacts to nesting birds.
- A qualified avian biologist shall monitor the nest site regularly during work activities to ensure that the nest site is not disturbed, the buffer is maintained and the success or failure of the nest is documented.
- If UC Merced elects to remove a nest tree, nest trees may only be removed after the qualified avian biologist has determined that the nests are unoccupied.
- If an active nest is causing a safety hazard, CDFW shall be contacted to determine if the nest can be removed.

(b) Minimize impacts to burrowing owl and compensate for habitat loss.

CDFW (2012) recommends that take-avoidance (preconstruction) surveys be conducted to locate active burrowing owl burrows in the construction work area and within an approximately 500-foot buffer zone around the construction area. a qualified avian biologist shall conduct take avoidance surveys for active burrows according to the CDFW's Staff Report on Burrowing Owl Mitigation (2012 Staff Report). Surveys shall be conducted no less than 14 days prior to initiating ground disturbance activities and surveillance surveys should be conducted as frequently as recommended in the 2012 Staff Report. If ground-disturbing activities are delayed or suspended for than 30 days after the take avoidance survey, the area shall be resurveyed. If no burrowing owls are detected, no further mitigation is required.

If active burrowing owls are detected, the following additional measures are required:

- Project implementation shall seasonally and spatially avoid negative impacts and disturbances that could result in the take of burrowing owls, nest or eggs.
- If burrowing owls and their habitat can be protected in place or adjacent to a construction site, buffer zones, visual screens or other measures shall be used to minimize disturbance impacts while project activities are occurring. To use these minimization measures, a qualified avian biologist shall determine the exact measures following the guidance described in the 2012 Staff Report.
- If owls must be moved away from the project site during the nonbreeding season, passive relocation techniques (e.g., installing one-way doors at burrow entrances) shall be used instead of trapping, as described in CDFW guidelines. At least 1 week will be necessary to complete passive relocation and allow owls to acclimate to alternate burrows.
- When destruction of occupied burrows is unavoidable during the nonbreeding season (September 1 to January 31), unsuitable burrows shall be enhanced (enlarged or cleared of debris) or new burrows created (by installing artificial burrows) at a ratio of 2:1 on protected lands approved by the CDFW. Newly created burrows shall follow guidelines established by the CDFW.

LRDP MM BIO-9b: New buildings and structures proposed under the 2020 LRDP shall incorporate bird-safe design practices (for example, American Bird Conservancy's Bird-Friendly Building Design [2015] or San Francisco Planning Department's Standards for Bird-Safe Buildings [2011]). The UC Merced Physical and Environmental Planning Department shall review the final designs of the buildings and structures to determine that appropriate bird safety designs have been effectively incorporated to reduce potential impacts to birds. The following design strategies shall be considered in the design of buildings and structures:

- Create building facades with “visual noise” via cladding or other design features that make it easier for birds to identify buildings and not mistake windows for open sky or trees.
- Incorporate windows that are not clear or reflective into the building or structure designs.
- Use windows that incorporate glass types such as UV-A or fritted glass and windows that incorporate UV-absorbing and UV-reflecting stripe.
- Use grid patterns on windows in locations with the highest potential for bird-window collisions (e.g., windows at the anticipated height of adjacent vegetation at maturity).
- Reduce the proportion of glass to other building materials in new construction.
- Avoid placement of bird-friendly attractants (i.e. vegetated roofs, water features, tall trees) near glass whenever possible.
- Install motion-sensitive lighting in any area visible from the exterior that automatically turn lights off during after-work hours.

LRDP MM GHG-1a: UC Merced shall set a goal to reduce or control the increase in its GHG emissions such that the total emissions do not exceed 3,300 MTCO₂e/year by the end of the year 2030.

UC Merced shall monitor GHG emissions each year, monitor upcoming projects for their potential to increase the campus’ GHG emissions, and implement project-specific and campus-wide GHG reduction measures to reduce the campus’ GHG emissions in accordance with the 3,300 MTCO₂e/year goal for 2030.

In the event that adequate reduction is not achieved by these measures, UC Merced shall purchase renewable energy credits, or other verifiable GHG offsets to keep the net emissions at or below 3,300 MTCO₂e/year.

LRDP MM GHG-1b: UC Merced shall implement LRDP Mitigation Measures AQ-2a and -2b.

LRDP MM GHG-1c: UC Merced shall periodically review new technologies that can be implemented to further reduce the campus’ GHG emissions.

Cumulative MM C-HYD-2: UC Merced shall work with the regional water agencies, including the City of Merced and MID, to develop programs to expand conjunctive use capabilities, increase recharge, and reduce groundwater demand.

LRDP MM NOI-3: Prior to initiation of construction on a project that is within 500 feet of off-site residential receptors, UC Merced shall develop and implement a construction noise mitigation program for that project that includes but is not limited to the following:

- Construction activities within 500 feet of any residences shall be restricted to the hours of 7:00 AM and 6:00 PM on weekdays and Saturdays with no construction on Sundays and holidays.
- All noise-producing project equipment and vehicles using internal combustion engines shall be equipped where appropriate with exhaust mufflers and air-inlet silencers in good operating condition that meet or exceed original factory specifications.
- Mobile or fixed “package” equipment (e.g., arc-welders, air compressors) shall be equipped with shrouds and noise control features that are readily available for that type of equipment.
- All mobile or fixed noise-producing equipment used on the project that is regulated for noise output by local, state or federal agency shall comply with such regulation while engaged in project-related activities.
- Electrically powered equipment shall be used instead of pneumatic or internal combustion powered equipment, where practicable.
- Material stockpiles, mobile equipment staging, construction vehicle parking, and maintenance areas shall be located as far as practicable from noise-sensitive land uses.
- Stationary noise sources such as generators or pumps shall be located away from noise-sensitive land uses as feasible.

- The use of noise-producing signals, including horns, whistles, alarms, and bells, shall be for safety warning purposes only. No project-related public address loudspeaker, two-way radio, or music systems shall be audible at any adjacent noise-sensitive receptor except for emergency use.
- The erection of temporary noise barriers shall be considered where project activity is unavoidably close to noise-sensitive receptors.
- The noisiest construction operations shall be scheduled to occur together to avoid continuing periods of the greatest annoyance, wherever possible.
- Construction vehicle trips shall be routed as far as practical from existing residential uses.
- The loudest campus construction activities, such as demolition, blasting, and pile driving, shall be scheduled during summer, Thanksgiving, winter, and spring breaks when fewer people would be disturbed by construction noise.
- Whenever possible, academic, administrative, and residential areas that will be subject to construction noise shall be informed a week before the start of each construction project.

LRDP MM NOI-4a: UC Merced shall avoid impact pile driving where possible in vibration-sensitive areas. Drilled piles or the use of vibratory pile driving will be used where geological conditions permit their use. For impact pile driving activities occurring within 50 feet of typical structures, limit groundborne vibration due to construction activities to 0.50 inch/second, ppv (limit of potential for damage to typical structures) in the vertical direction at sensitive receptors. Since in many cases the information available during the preliminary engineering phase would not be sufficient to define specific vibration mitigation measures, UC Merced shall describe and commit to a mitigation plan to minimize construction vibration damage using all feasible means available.

LRDP MM NOI-4b: For construction adjacent to highly sensitive uses such as laboratories, UC Merced shall apply additional measures as feasible, including advance notice to occupants of sensitive facilities to ensure that precautions are taken in those facilities to protect ongoing activities from vibration effects.

LRDP MM PUB-6a: UC Merced shall work with the County to avoid physical deterioration of existing facilities at Lake Yosemite Regional Park, and/or improve park facilities within the existing park site as necessitated by the increased uses associated with development of the campus.

LRDP MM PUB-6b: UC Merced will pay its fair share of the cost of necessary improvements to the regional park. UC Merced's share of funding will be based on the percentage that on-campus residential population represents of the total population in eastern Merced County at the time that an improvement is implemented.

LRDP MM PUB-6c: In recognition of the sensitive resources present on lands immediately adjacent to the regional park, all regional park improvement projects that are implemented by the County within 250 feet of the park's eastern boundary pursuant to LRDP Mitigation Measures PUB-6a and PUB-6b above, will implement mitigation measures to avoid and minimize indirect effects on biological resources.

LRDP MM TRANS-1: Campus Traffic Mitigation Program (CTMP). The Campus Traffic Mitigation Program is a program to monitor trip generation, reduce peak-hour trips, and participate in roadway improvements to mitigate impacts at off-campus intersections, and adjacent roadway segments in the case of Lake Road, determined to be affected by the development of the campus under the 2020 LRDP. CEQA provides that an agency can mitigate its contribution to local and regional environmental impacts by contributing its proportional share of funding to mitigation measures designed to alleviate the identified impact (CEQA Guidelines §15130(a)(3)).

The CTMP will consist of the following elements/measures:

Measure TRANS-1a: Travel Demand Management. To reduce on- and off-campus vehicle trips and resulting impacts, the University will continue to implement and expand a range of Transportation Demand Management (TDM) strategies. TDM strategies will include measures to encourage transit and shuttle use and alternative transportation modes including bicycle transportation, implement parking policies that reduce

demand, and implement other mechanisms that reduce vehicle trips to and from the campus. The University shall monitor the performance of campus TDM strategies through annual surveys.

Measure TRANS-1b: Transit Enhancement. To enhance transit systems serving the campus, the University will work cooperatively with the City of Merced, County of Merced, CatTracks, The Bus, StaRT, YARTS, and other local agencies to coordinate service routes with existing and proposed shuttle and transit programs.

Measure TRANS-1c: Sustainability and Monitoring. The University will review individual projects proposed under the 2020 LRDP for consistency with UC Sustainable Practices Policy and UC Merced TDM strategies set forth in the 2020 LRDP to ensure that bicycle and pedestrian improvements, alternative fuel infrastructure, transit stops, and other project features that promote alternative transportation are incorporated in the project.

Measure TRANS-1d: Campus Traffic Impact Monitoring. The University will monitor trip generation resulting from the campus development under the 2020 LRDP to track the actual trip generation relative to the projections in this SEIR. The University will conduct traffic cordon counts of the campus with each 2,000-person increase in student population, measured by three-term average headcount enrollment increases with 2019 – 2020 as the base academic year. If this monitoring determines that traffic attributable to the campus contributes to a significant traffic impact at any of the intersections listed in Table 4.8-9, the University will implement measures to reduce vehicle trips contributing to the impact or provide its proportional share of funding for improvements at the impacted intersections presented in Table 4.8-9.

Measure TRANS-1e: Proportional Share Determination. At the time a significant impact is identified pursuant to the monitoring under Measure TRANS-1d, the University's actual percent contribution to the total traffic volume at pertinent intersections and roadway segments will be calculated and used as the basis for determining the University's mitigation obligation, or proportional share of funding for the traffic improvements listed in the table.

Measure TRANS-1f: Mitigation Payments. The amount of the University's mitigation funding will be based on the University's proportional share of the affected jurisdiction's actual cost of the relevant traffic improvement(s) at the time of final bid/contract documents. The amount will be calculated by applying the University's proportional share determined in Measure TRANS-1e to the total cost of the improvement. Funding will be internally committed by the University at the time the traffic impact is triggered pursuant to the results of monitoring under Measure TRANS-1d. Payments will be made to the appropriate jurisdiction at the time a Notice to Proceed with the construction of the improvements is issued. If improvements are constructed before the impact is triggered, the University will pay its proportional share at the time that the impact is triggered, based on the University's monitoring under Measure TRANS-1d. Mitigation payments will be made only after the University has been provided the opportunity to review the scope and budget of the improvement project. As Intersection #3, Lake/Bellevue Road intersection, directly serves the campus, the University will be responsible for the entire cost of improvements at this intersection.

Cumulative MM C-TRANS-1: The University will implement LRDP MM TRANS-1 to reduce vehicle trips, monitor traffic growth, and make fair share contributions to address the project's contribution to cumulative impacts under 2035 conditions.

Certain improvements in Table 4.8-12 are the same as, or similar to, improvements identified in Table 4.8-9 for the 2030 with LRDP Project scenario; therefore, as and when fair share is calculated for these intersection improvements, the calculation shall take into account the redundant improvements.

As Intersections #3, #18 and #19 would directly serve the campus, the University will be responsible for the entire cost of improvements at these three intersections.

Appendix B

Mitigation Monitoring and Reporting
Program, UC Merced 2009 Long Range
Development Plan

MITIGATION MONITORING AND REPORTING PROGRAM

The California Environmental Quality Act (CEQA) requires that a Lead Agency establish a program to monitor and report on mitigation measures adopted as part of the environmental review process to avoid or reduce the severity and magnitude of potentially significant environmental impacts associated with project implementation. CEQA (Public Resources Code Section 21081.6 (a) (1)) requires that a Mitigation Monitoring and Reporting Program (MMRP) be adopted at the time that the agency determines to carry out a project for which an EIR has been prepared, to ensure that mitigation measures identified in the EIR are fully implemented.

As discussed in the Draft EIS/EIR, the UC Merced and University Community Project encompasses the development of the UC Merced Campus and the University Community and the impacts of this project are evaluated in Volumes 1 and 2 of the Draft EIS/EIR. The MMRP for the UC Merced 2009 Long Range Development Plan is presented in **Table 1, Mitigation Monitoring and Reporting Program, UC Merced 2009 Long Range Development Plan**, which includes the full text of mitigation measures identified in the Final EIS/EIR. In addition, Volume 3 of the Draft EIS/EIR evaluates the potential environmental impacts from the development of the next phase of campus development (UCM 2020 Project). The MMRP for the UCM 2020 Project is presented in **Table 2, Mitigation Monitoring and Reporting Program, UCM 2020 Project**, which include the full text of project-specific mitigation measures identified in the Final EIS/EIR for that project. Each MMRP describes implementation and monitoring procedures, responsibilities, and timing for each mitigation measure identified in the Draft EIS/EIR, including:

Significant Impact: Identifies the Impact Number and statement from the Final EIS/EIR.

Mitigation Measure: Provides full text of the mitigation measure as provided in the Final EIS/EIR.

Monitoring/Reporting Action(s): Designates responsibility for implementation of the mitigation measure and when appropriate, summarizes the steps to be taken to implement the measure.

Mitigation Timing: Identifies the stage of the project during which the mitigation action will be taken.

Monitoring Schedule: Specifies procedures for documenting and reporting the implementation of the mitigation measure.

UC Merced may modify the means by which a mitigation measure will be implemented, as long as the alternative means ensure compliance during project implementation. The responsibilities of mitigation implementation, monitoring and reporting extend to several UC Merced departments and offices. The manager or department lead of the identified unit or department will be directly responsible for ensuring

the responsible party complies with the mitigation. The Physical Planning, Design and Construction Department (PPD&C) is responsible for the overall administration of the program and for assisting relevant departments and project managers in their oversight and reporting responsibilities. The PPD&C is also responsible for ensuring the relevant parties understand their charge and complete the required procedures accurately and on schedule.

Table 1
Mitigation Monitoring and Reporting Program
UC Merced Long Range Development Plan

Significant Impact	Mitigation Measure	Monitoring/Reporting Responsibility and Action(s)	Mitigation Timing	Monitoring Schedule
AESTHETICS				
Alt 1 – Impact AES-1: The Proposed Action would result in a substantial adverse effect on scenic vistas.	MM AES-1a: The University will plant tall trees along the campus' western boundary to screen views of the campus facilities from Lake Yosemite Regional Park.	PPD&C Review final landscape plans of projects along the western boundary of the Campus. Revise design, if necessary, to screen views to the extent feasible.	Project design and construction.	Prior to construction.
	MM AES-1b: Where possible, major vehicular and pedestrian transportation corridors on the Campus shall be located and designed to provide views of the Sierra Nevada.	PPD&C Review final circulation plans in the 2009 LRDP. Revise design, if necessary, to provide the scenic view to the extent feasible.	Project design and construction.	Prior to construction.

Significant Impact	Mitigation Measure	Monitoring/Reporting Responsibility and Action(s)	Mitigation Timing	Monitoring Schedule
AESTHETICS (continued)				
Alt 1 – Impact AES-3: The Proposed Action would substantially adversely alter the visual quality and character of the site and its surroundings.	MM AES-3a: The University shall design all new aboveground infrastructure on the Campus to the following standards: (a) Screen aboveground infrastructure from view from public rights-of-way or scenic vistas, via landscaping, fencing, or other architectural screening; (b) Require creative design measures to camouflage structures by integrating them with existing buildings and among other existing uses; (c) Locate aboveground infrastructure on sites that are not visible from visually sensitive areas, such as residential communities and open space areas; (d) Require providers to co-locate their structure on a single site, where technically feasible and visually desirable; and (e) Locate antennae and equipment on other existing community facility sites, such as water tanks or utility poles.	PPD&C Review of engineering plan for aboveground utility lines. Review project design for compatibility. Revise design, if necessary, to ensure compatibility.	Project design and construction.	Prior to construction.
AIR QUALITY				
Alt 1 – Impact AQ-1: The Proposed Action would result in construction emissions that would violate an air quality standard or contribute substantially to an existing or projected air quality violation.	MM AQ-1a: The Campus and the developers within the University Community shall include in all construction contracts the measures specified in SJVAPCD Regulation VIII (as it may be amended for application to all construction projects generally) to reduce fugitive dust impacts, including but not limited to the following: <ul style="list-style-type: none"> • All disturbed areas, including storage piles, which are not being actively utilized for construction purpose, shall be effectively stabilized of dust emissions using water, chemical stabilizer/suppressant, or vegetative ground cover. • All on-site unpaved roads and off-site unpaved access roads shall be effectively stabilized of dust emissions using water or chemical stabilizer/suppressant. • All land clearing, grubbing, scraping, excavation, land leveling, grading, cut and fill, and demolition activities shall be effectively controlled of fugitive dust emissions using application of water or by presoaking. 	PPD&C Continue to require standard dust control measures as part of every construction project contract.	Prior to construction.	Confirm and document prior to construction of project.

Significant Impact	Mitigation Measure	Monitoring/Reporting Responsibility and Action(s)	Mitigation Timing	Monitoring Schedule
AIR QUALITY (continued)				
Alt 1 – Impact AQ-1 (continued)	<ul style="list-style-type: none"> When materials are transported off-site, all material shall be covered, effectively wetted to limit visible dust emissions, or at least 6 inches of freeboard space from the top of the container shall be maintained. All operations shall limit or expeditiously remove the accumulation of mud or dirt from adjacent public streets at least once every 24 hours when operations are occurring. (The use of dry rotary brushes is expressly prohibited except where preceded or accompanied by sufficient wetting to limit visible dust emissions. Use of blower devices is expressly forbidden.) <p>Following the addition of materials to, or the removal of materials from, the surface of outdoor storage piles, storage piles shall be effectively stabilized of fugitive dust emissions by using sufficient water or chemical stabilizer/suppressant.</p>	<p>PPD&C</p> <p>Inspect construction site at regular intervals during construction to verify compliance with specified dust control measures.</p>	During construction.	Confirm and document at regular intervals throughout construction period.
	<p>MM AQ-1b: The Campus and the developers within the University Community shall include in construction contracts for large construction projects near sensitive receptors the following control measures characterized by the SJVAPCD as enhanced and optional control measures:</p> <ul style="list-style-type: none"> Limit traffic speeds on unpaved roads to 15 mph. Install sandbags or other erosion control measures to prevent silt runoff to public roadways from sites with a slope greater than 1 percent. To the extent feasible, limit area subject to excavation, grading, and other construction activity at any one time. 	<p>PPD&C</p> <p>Continue to require contract specifications for dust and erosion control measures as part of every construction project contract.</p>	Prior to construction.	Confirm and document prior to construction of project.
		<p>PPD&C</p> <p>Inspect construction site at regular intervals during construction to verify compliance with specified dust and erosion control measures.</p>	During construction.	Confirm and document at regular intervals throughout construction period.

Significant Impact	Mitigation Measure	Monitoring/Reporting Responsibility and Action(s)	Mitigation Timing	Monitoring Schedule
AIR QUALITY (continued)				
Alt 1 – Impact AQ-1 (continued)	<p>MM AQ-1c: The Campus and the developers within the University Community shall implement the following mitigation measures to reduce impacts of ROG and NO_x emissions from construction equipment exhaust:</p> <ul style="list-style-type: none"> • When feasible, use construction equipment operated by alternative fuel. • Minimize idling time to a maximum of 10 minutes when construction equipment is not in use. • To the extent practicable, manage operation of heavy-duty equipment to reduce emissions. • Employ construction-activity management techniques such as extending the construction period outside the ozone season of May through October. • Use low-emission on-site stationary equipment. 	<p>PPD&C</p> <p>Adopt standard specifications that include the specified measures to reduce emissions of ROG and NO_x from construction equipment exhaust as part of every construction project contract.</p>	Prior to construction.	Confirm and document prior to construction of project.
	<p>MM AQ-1d: Prior to use in construction, the Campus and the developers within the University Community will evaluate the feasibility of repowering or retrofitting the large off-road construction equipment that will be operating for substantial periods. Engine replacements will be required to meet the stricter of US EPA or CARB off-road diesel engines standards. Retrofit technologies such as particulate traps, selective catalytic reduction, oxidation catalysts, air enhancement technologies, etc., will be evaluated. Retrofitting will be required if they are certified by CARB and/or the US EPA, and are commercially available and can feasibly be retrofitted onto construction equipment. Retrofit technologies certified to the highest level (e.g., CARB Level 3) shall be evaluated first before lower level technologies are evaluated.</p>	<p>PPD&C</p> <p>Evaluate feasibility of repowering or retrofitting construction equipment to meet the stricter of US EPA or CARB off-road diesel engines standards, as described.</p>	Prior to construction.	Confirm and document prior to construction of project.
		<p>PPD&C</p> <p>Ensure retrofitting technologies are implemented in equipment, prior to agreement of construction contract.</p>	Prior to construction.	Confirm and document prior to construction of project.

Significant Impact	Mitigation Measure	Monitoring/Reporting Responsibility and Action(s)	Mitigation Timing	Monitoring Schedule
AIR QUALITY (continued)				
Alt 1 – Impact AQ-2: The Proposed Action would result in operational emissions that would violate an air quality standard or contribute substantially to an existing or projected air quality violation.	MM AQ-2a: The Campus will work with the SJVAPCD to ensure that emissions directly and indirectly associated with the Campus, University Community, and induced growth are adequately accounted for and mitigated in applicable air quality planning efforts. The SJVUAPCD can and should adopt adequate measures consistent with applicable law to ensure that air quality standard violations are avoided.	PPD&C Monitor changes in air quality regulations. Attend SJVAPCD meetings on changing regulations. Meet with SJVAPCD to discuss air quality planning efforts. Document meeting results.	During operation.	As changes in standards and procedures occur.
	MM AQ-2b: The Campus and the developers within the University Community shall implement the following measures to reduce emissions from vehicles: <ul style="list-style-type: none"> Provide pedestrian-enhancing infrastructure to encourage pedestrian activity and discourage vehicle use. Provide bicycle facilities to encourage bicycle use instead of driving. Provide transit-enhancing infrastructure to promote the use of public transportation. Provide facilities to accommodate alternative-fuel vehicles such as electric cars and CNG vehicles. 	PPD&C Ensure that facilities listed are included in project design as applicable: verify construction of pedestrian-enhancing infrastructure, bicycle facilities, transit-enhancing infrastructure, facilities to accommodate alternative-fuel vehicles.	During detailed project planning or project design prior to project.	Prior to approval of final design of applicable projects.
	<ul style="list-style-type: none"> Improve traffic flows and congestion by timing of traffic signals to facilitate uninterrupted travel. 	Facilities Department Monitor traffic at affected intersections and adjust timing of traffic signals as appropriate to facilitate uninterrupted travel.	During operation.	At least yearly.

Significant Impact	Mitigation Measure	Monitoring/Reporting Responsibility and Action(s)	Mitigation Timing	Monitoring Schedule
AIR QUALITY (continued)				
Alt 1 – Impact AQ-2 (continued)	MM AQ-2c: The Campus and the developers within the University Community shall implement the following measures to reduce emissions from area sources, as feasible: <ul style="list-style-type: none"> • Use solar or low-emission water heaters. • Orient buildings to take advantage of solar heating and natural cooling and use passive solar designs. • Increase wall and attic insulation. • EPA certified wood-burning appliances, or residential natural-gas fireplaces. • Provide electric equipment for landscape maintenance. 	PPD&C Adopt standard specifications or design guidelines that include area source reduction measures to be required for construction projects. Ensure that where feasible applicable measures are included in each project.	During operation.	At least yearly.
		Purchasing Department Develop policy that requires that where feasible new landscape equipment purchased is electric.	During operation.	At least yearly.
Alt 1 – Impact AQ-4: The Proposed Action would result in a cumulatively considerable net increase of any criteria pollutant for which the project region is nonattainment under an applicable federal or state ambient air quality standard (including releasing emissions which exceed quantitative thresholds for ozone precursors).	Mitigation Measures AQ-1 and AQ-2 would apply to this impact. No further mitigation is available.	See monitoring and reporting for Mitigation Measures AQ-1 and AQ-2 above.		

Significant Impact	Mitigation Measure	Monitoring/Reporting Responsibility and Action(s)	Mitigation Timing	Monitoring Schedule
BIOLOGICAL RESOURCES				
Alt 1 – Impact BIO-2: The Proposed Action would result in adverse impacts on special-status plant species.	<p>MM BIO-2: Mitigate for loss of special-status plants and habitat through additional off-site compensation.</p> <p>Prior to any ground disturbance on lands to the north and east of Le Grand Canal (i.e., land adjacent to CNR) a restoration ecologist, retained by the University, shall prepare a feasibility analysis regarding the potential to transplant seeds from succulent owl's-clover, shining navarretia, and dwarf downingia plants. This feasibility analysis will address potential sites suitable and available for transplantation as well as availability of suitable plant material, and costs associated with this method of mitigation. If it is determined to be feasible, to further minimize impacts to these special status plants, the University shall transplant seeds from succulent owl's-clover, shining navarretia, and dwarf downingia plants, seeds from all three species will be collected and translocated to suitable habitat within the CNR. Translocating the stands to the CNR would minimize any potential genetic contamination, because the affected stands are part of the occurrences present within the CNR and, presumably, part of the same populations. The University will retain a qualified restoration ecologist to work closely with resource agency specialists (USFWS and CDFG staff) and knowledgeable individuals to locate and determine the suitability of translocation sites within the CNR. Translocation of the stands that would be affected by the Proposed Action would involve (1) identifying suitable transplant sites, (2) moving the plant material to the transplant sites, and (3) monitoring the transplant sites to document recruitment and survival rates. The restoration ecologist will develop a detailed transplantation and monitoring plan that provides detailed information on:</p> <ul style="list-style-type: none"> • coordination efforts with agencies and knowledgeable individuals, • methods for collecting seeds from the affected populations, • seed storage methods, • planting plan and specifications (including planting locations and densities), 	<p>PPD&C</p> <p>Retain the services of a qualified restoration ecologist to work with resource agency specialists, determine suitability of translocation sites, and develop transplantation monitoring plan as described.</p>	<p>Prior to project construction that would result in impacts on succulent owl's-clover, shining navarretia, and dwarf downingia plants.</p>	<p>Document upon completion.</p>

Significant Impact	Mitigation Measure	Monitoring/Reporting Responsibility and Action(s)	Mitigation Timing	Monitoring Schedule
BIOLOGICAL RESOURCES (continued)				
.	<ul style="list-style-type: none"> measurable success criteria that can be achieved within a 10-year period, monitoring and reporting methods and schedule, funding source and responsible party, and adaptive management measures to ensure that the desired success criteria are achieved. 			
	<p>The University will submit draft copies of the transplantation and monitoring plan to the appropriate resource agencies (e.g., USFWS and CDFG) for review and comment. The plan will be approved by the appropriate agencies before it is implemented. As part of the plan, the following general steps would be involved in the translocation and monitoring efforts, as appropriate:</p> <ul style="list-style-type: none"> A site analysis will be conducted to document the biotic and physical requirements of succulent owl's-clover, shining navarretia, and dwarf downingia within the project site. This task will include an evaluation of the populations. Information on soil type, plant species associations, aspect, vegetation cover, and level of disturbance will be gathered during this evaluation. Sites that may be suitable for transplanting the seeds will be identified and evaluated. Suitable sites may not contain existing stands of species being translocated. The same information as identified above will be gathered for the translocation sites. <p>Seeds will be collected for propagation or storage purposes. Seed collection, storage, and propagation will be done by a qualified restoration ecologist. The seeds will be planted at the transplant sites at the appropriate time to ensure higher survival rates.</p>	<p>PPD&C/Restoration Ecologist</p> <p>Submit transplantation monitoring plan to appropriate resource agencies. Verify that the plan is approved prior to implementation.</p>	Prior to construction	<p>Secure approval of plan by appropriate agencies prior to construction.</p> <p>Prepare a memo to document that plan is approved.</p>

Significant Impact	Mitigation Measure	Monitoring/Reporting Responsibility and Action(s)	Mitigation Timing	Monitoring Schedule
BIOLOGICAL RESOURCES (continued)				
Alt 1 – Impact BIO-2 (continued)	<ul style="list-style-type: none"> Topsoil containing seeds will not be used for transplantation into existing vernal pool habitat because of the potential for coincidentally translocating the seeds or cysts of other plant and animal species. However, soil may be translocated to newly created habitat or may be harvested for establishing a population under culture. Dried plants and topsoil will be excavated only from the areas containing the affected plants and not from pools within conservation areas. The seed material will be excavated after the plants have set seed and dried (generally by late summer). The excavation will be done using hand tools. A post-translocation report that documents the measures used to relocate the populations and where they were relocated will be prepared. Translocated populations will be monitored to document survival and recruitment rates over a period of time established in consultation with the resource agencies but for a minimum of five years. The populations would be monitored annually during the flowering period to document success rates and to identify remedial actions. The detailed transplant and monitoring plan will provide specific monitoring protocol and documentation procedures. A copy of the annual monitoring reports and the final monitoring report will be provided to the appropriate resource agencies for review. 	PPD&C Verify implementation of monitoring efforts as identified in the approved plan.	Prior to start of construction.	Monitor translocated populations and prepare monitoring reports annually.

Significant Impact	Mitigation Measure	Monitoring/Reporting Responsibility and Action(s)	Mitigation Timing	Monitoring Schedule
BIOLOGICAL RESOURCES (continued)				
Alt 1 – Impact BIO-9: The Proposed Action would result in potentially significant adverse impacts on nesting special-status bird species and non-special-status migratory birds and raptors.	MM BIO-9: Avoid and minimize impacts on special-status and non-special-status migratory birds, and raptors. (a) Limit construction to the non-breeding season or, if breeding season work is required, conduct pre-construction (tree, shrub, and ground) nest surveys to identify and avoid active nests or as an option, remove potential breeding habitat during the non-breeding season. <ul style="list-style-type: none"> If feasible, the applicant shall conduct all construction-related activities including (but not limited to) tree and shrub removal, other vegetation clearing, grading, or other ground disturbing activities during the non-breeding season (between August 16 and February 14) for special-status and non-special-status migratory birds and raptors. If construction activities are scheduled to occur during the breeding season, a qualified avian biologist, with knowledge of the species to be surveyed, shall be retained to conduct focused nesting surveys within 15 days of the start of ground-disturbing or construction activities and within the appropriate habitat. 	PPD&C Retain a qualified biologist to conduct surveys and to develop a plan to avoid active nest sites during construction, or as an option, remove potential breeding habitat during non-breeding season. Verify survey was conducted and document results. Include mitigation specifications in construction contract as necessary.	During the breeding season prior to start of construction or of each construction phase.	Prior to construction.
	<ul style="list-style-type: none"> Specifically, tree, shrub, and ground nesting surveys for special-status birds (including but not limited to white-tailed kite, Swainson's hawk, northern harrier, burrowing owl, loggerhead shrike, and tricolored blackbird), and other migratory birds and raptors shall be conducted before any construction disturbances occur in or near suitable nesting habitat within 500 feet (0.25 mile for Swainson's hawk) of the construction work area between February 15 and August 15. If an active nest is located on or within 500 feet (0.25 mile for Swainson's hawk) of the project area, CDFG shall be consulted to determine an appropriate no-disturbance buffer around the nest until the nest is no longer active and the young have fledged. No construction shall be allowed within this exclusion area without consulting with CDFG. A wildlife biologist shall monitor the nest site during construction at least once a week, or at a frequency determined by CDFG, to ensure that the nest site is not disturbed and the buffer is maintained. 	PPD&C Develop and implement a plan to avoid active nest sites during construction, establish buffer zone, and monitor active nests. Verify that plan is implemented.	Develop plan prior to construction Monitor prior and during construction activities.	Prior to and during construction activities.

Significant Impact	Mitigation Measure	Monitoring/Reporting Responsibility and Action(s)	Mitigation Timing	Monitoring Schedule
BIOLOGICAL RESOURCES (continued)				
Alt 1 – Impact BIO-9 (continued)	<ul style="list-style-type: none"> If the project proponent elects to remove a nest tree, nest trees may only be removed between August 16 and February 28, after the qualified avian biologist has determined that the nests are unoccupied. (b) Minimize impacts to burrowing owl and compensate for habitat loss. The CDFG (1995) recommends that preconstruction surveys be conducted to locate active burrowing owl burrows in the construction work area and within a 500-foot-wide buffer zone around the construction area. The project proponent or its contractor shall retain a qualified biologist to conduct preconstruction surveys for active burrows according to the CDFG's Staff Report on Burrowing Owl Mitigation (California Department of Fish and Game 1995). The preconstruction surveys shall include a breeding season survey and a wintering season survey. If no burrowing owls are detected, no further mitigation is required. <p>If active burrowing owls are detected, the following additional measures are required:</p> <ul style="list-style-type: none"> Occupied burrows shall not be disturbed during the breeding season (February 1 to August 31), which requires a 250 foot no disturbance buffer. If owls must be moved away from the project site during the nonbreeding season, passive relocation techniques (e.g., installing one-way doors at burrow entrances) shall be used instead of trapping, as described in CDFG guidelines. At least 1 week will be necessary to complete passive relocation and allow owls to acclimate to alternate burrows. When destruction of occupied burrows is unavoidable during the nonbreeding season (September 1 to January 31), unsuitable burrows shall be enhanced (enlarged or cleared of debris) or new burrows created (by installing artificial burrows) at a ratio of 2:1 on protected lands approved by the CDFG. Newly created burrows shall follow guidelines established by the CDFG (1995). These guidelines also require compensation for loss of foraging habitat described in detail under Impact BIO-8 above. 	<p>PPD&C</p> <p>Retain a qualified biologist to conduct preconstruction surveys for active burrows according to the CDFG's Staff Report on Burrowing Owl Mitigation. If burrowing owls detected, verify that mitigation measures are followed. Document in a memo.</p>	<p>Develop plan prior to construction</p> <p>Monitor prior and during construction activities.</p>	<p>Confirm and document in project file during project final design and construction.</p>

Significant Impact	Mitigation Measure	Monitoring/Reporting Responsibility and Action(s)	Mitigation Timing	Monitoring Schedule
CULTURAL RESOURCES				
Alt 1 – Impact CUL-1: Implementation of the Proposed Action could damage or destroy significant historic resources located within the project footprint.	MM CUL-1b: Prior to the development of the Campus and Community North, the University shall ensure that the two previously evaluated historic irrigation canals, Fairfield Canal and the Le Grand Canal, the farm complex, the fence line and prehistoric site MCN-1 which were recommended to be found ineligible for listing under the NRHP and CRHR, are formally evaluated. Formal NRHP and CRHR evaluations of these resources will be reviewed by the SHPO for concurrence. If SHPO does not concur with the findings of these previous evaluations, the development of any necessary treatment measures will be stipulated in a Historic Properties Treatment Plan as requirements of the PA executed for this project. Identified treatment measures will be implemented prior to any direct effects to the canals as required by the PA.	PPD&C Retain a qualified historian to conduct a formal evaluation of the irrigation canals, Fairfield Canal and the Le Grand Canal, the farm complex, the fence line and prehistoric site MCN-1. SHPO to determine if the sites are eligible for the NRHP and CRHR. If eligible, prepare Historic Properties Treatment Plan. Document preparation and implementation of the plan in memo.	Prior to development of Campus and Community North; during site selection or project design.	Prior to development on the two previously evaluated historic irrigation canals, Fairfield Canal and the Le Grand Canal, the farm complex, the fence line and prehistoric site MCN-1.
Alt 1 – Impact CUL-2: Implementation of the Proposed Action could cause damage to unidentified or buried cultural resources.	MM CUL-2: If buried cultural resources, such as chipped or ground stone, historic debris, building foundations, or non-human bone are inadvertently discovered during ground-disturbing activities on the campus, work will stop in that area and within 100 feet of the find until a qualified archaeologist can assess the significance of the find and, if necessary, develop appropriate treatment measures. Treatment measures typically include development of avoidance strategies or mitigation of impacts through data recovery programs such as excavation or detailed documentation. If cultural resources are discovered during construction activities, the construction contractor and lead contractor compliance inspector will verify that work is halted until appropriate treatment measures are implemented in coordination with the USACE and UC Merced.	PPD&C Inform contractor about need to watch for buried cultural resources resources.	During preparation of construction contract.	Document in project file at the start of construction.
		If resources are discovered, halt work and implement appropriate treatment measures.	During construction, in the event of a discovery.	Document in project file upon implementation of required measures.

Significant Impact	Mitigation Measure	Monitoring/Reporting Responsibility and Action(s)	Mitigation Timing	Monitoring Schedule
CULTURAL RESOURCES (continued)				
Alt 1 – Impact CUL-3: Implementation of the Proposed Action could cause damage to previously unidentified human remains.	MM CUL-3: If human remains of Native American origin are discovered during ground-disturbing activities, the Campus and/or developer will comply with state laws relating to the disposition of Native American burials, which falls within the jurisdiction of the California Native American Heritage Commission (Public Resources Code Section 5097). 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 <ul style="list-style-type: none"> the coroner of Merced 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 land owner or the person responsible for the excavation work, for means of treating or disposing of, with appropriate dignity, the human remains and any associated grave goods as provided in Public Resources Code Section 5097.98; or the California Native American Heritage Commission was unable to identify a descendant or the descendant failed to make a recommendation within 24 hours after being notified by the Commission. 	PPD&C Document measures taken to preserve human remains discovered on campus in place.	During construction.	Confirm and document in project file during planning and construction.
		PPD&C Retain Native American representative to monitor archaeological excavation.	During planning, and upon discovery of human remains in an archaeological context.	Confirm and document in project file.
		PPD&C Contact archaeologist and County Coroner in the event of discovery of suspected human bone.	Upon discovery of suspected human bone.	Confirm and document in project file.

Significant Impact	Mitigation Measure	Monitoring/Reporting Responsibility and Action(s)	Mitigation Timing	Monitoring Schedule
CULTURAL RESOURCES (continued)				
Alt 1 – Impact CUL-4: Development of the Proposed Action would have the potential to disturb or destroy paleontological resources.	MM CUL-4a: Prior to project construction, construction personnel will be informed of the potential for encountering significant paleontological resources. All construction personnel will be informed of the need to stop work in the vicinity of a potential discovery until a qualified paleontologist has been provided the opportunity to assess the significance of the find and implement appropriate measures to protect or scientifically remove the find. Construction personnel will also be informed of the requirements that unauthorized collection resources are prohibited.	PPD&C For projects in previously undisturbed lands, inform contractor about need to watch for paleontological resources.	During preparation of construction contract.	Document in project file at the start of construction.
		PPD&C Retain qualified paleontologist to perform work as specified.	During construction, in the event of a discovery.	Document in project file upon completion of recordation and recovery.
	MM CUL-4b: A qualified paleontologist will be intermittently present to inspect exposures of Merhten Formation, North Merced Gravels, and Riverbank Formation during construction operations to ensure that paleontological resources are not destroyed by project construction.	PPD&C Retain qualified paleontologist to perform work as specified.	Prior to start of excavation and during construction.	Complete upon documentation of compliance with appropriate measures.
GEOLOGY AND SOILS				
Alt 1 – Impact GEO-2: The Proposed Action could expose people or structures to increased risk of structural damage and injury from ground shaking and related hazards.	MM GEO-2: During project-specific building design, a site-specific geotechnical investigation shall be performed by a Certified Engineering Geologist or Licensed Geotechnical Engineer to assess detailed seismic, geologic, and soil conditions at each construction site. The study shall include an evaluation of liquefaction potential, slope stability, landslide potential, expansive and compressible soils, and other structural characteristics and shall identify specific geotechnical recommendations designed to mitigate for the site hazards. The geotechnical recommendations will be followed.	PPD&C Retain Certified Engineering Geologist or Licensed Geotechnical Engineer to conduct site-specific geotechnical investigation. Document implementation of geotechnical recommendations in a memo.	During project design, prior to start of excavation, and during construction.	Complete upon construction in compliance with geotechnical report.

Significant Impact	Mitigation Measure	Monitoring/Reporting Responsibility and Action(s)	Mitigation Timing	Monitoring Schedule
HAZARDOUS MATERIALS AND PUBLIC SAFETY				
Alt 1 – Impact HAZ-4: The Proposed Action could be located on a site that contains hazardous materials and, could create a significant hazard to the public or the environment.	MM HAZ-4: In the event that non-permitted disposal sites, trash burn pits, wells, underground storage devices, or unknown hazardous materials are encountered during construction on the campus site, construction activities would cease until all contaminated areas are identified, and remediated or removed. This process of identification and remediation or removal would be coordinated with the Merced County Division of Environmental Health.	PPD&C Inform contractor about need to watch for hazardous materials.	During preparation of construction contract.	Document in project file at the start of construction.
		PPD&C Coordinate with Merced County Division of Environmental Health as required.	During construction, in the event of an encounter.	Document in project file upon completion of remediation or removal.

Significant Impact	Mitigation Measure	Monitoring/Reporting Responsibility and Action(s)	Mitigation Timing	Monitoring Schedule
NOISE				
Alt 1– Impact NOI-1: Implementation of the Proposed Action would result in increased vehicular traffic on the regional road network, which would increase ambient traffic noise levels at existing off-site noise-sensitive uses.	<p>MM NOI-1: For existing sensitive receptors that are predicted to be exposed to traffic noise increases that exceed the noise significance thresholds, project proponents shall commission a study, conducted by a qualified acoustical professional, to define reasonable and feasible noise mitigation, and shall implement the recommendations. Mitigation measures would include the following:</p> <ul style="list-style-type: none"> • Re-pave the streets with ‘quiet’ pavement types such as a porous Open-Grade Asphalt Concrete with fine aggregate size to reduce exterior noise levels to meet the noise thresholds (60 dBA Ldn for residences, schools, and libraries, and 70 dBA Ldn for parks). The effectiveness of this measure would depend on the existing pavement conditions along the roadway segment. Noise reductions of 3 to 4 dBA below the noise levels associated with ‘average’ pavements have been achieved using quiet pavement. • In areas where ‘quiet’ pavement is not an option or would not reduce exterior noise levels to meet the noise thresholds, forced-air mechanical ventilation or building sound insulation such as sound-rated windows and doors would be provided to reduce interior noise levels in existing residences that are anticipated to exceed 45 dBA Ldn inside homes. This mitigation would be provided on a case-by-case basis and would typically be applicable in rural areas where the construction of sound barriers or the use of ‘quiet’ pavement is not found to be feasible and interior noise levels inside residences are anticipated to exceed 45 dBA Ldn. 	<p>PPD&C</p> <p>Retain qualified acoustical professional to conduct a study as described.</p> <p>Document completion of study and implementation of recommendations.</p>	During detailed project planning or project design prior to project approval.	<p>Develop construction noise mitigation measures.</p> <p>Document compliance with measures when materials for construction are approved.</p>

Significant Impact	Mitigation Measure	Monitoring/Reporting Responsibility and Action(s)	Mitigation Timing	Monitoring Schedule
NOISE (continued)				
Alt 1 – Impact NOI-2: Daily operations within the Campus and University Community and special events at the Campus could expose existing off site and future on-site noise-sensitive receptors to elevated noise levels.	MM NOI-2a: In areas where new noise-generating Campus or Community uses are proposed adjacent to or integrated with noise-sensitive uses within the Campus or Community North, the project proponents shall retain a qualified acoustical consultant to prepare a design-level study to define reasonable and feasible noise mitigation to reduce noise levels to comply with noise standards. The identified mitigation shall be included in the design of the project. Measures that can be implemented to achieve this include but are not limited to: <ul style="list-style-type: none"> • Using site planning to minimize noise in noise-sensitive areas by locating noise-generating operations in areas that are set back or acoustically shielded from noise-sensitive uses. • Incorporating appropriate noise controls so that mechanical equipment from proposed uses does not generate noise levels in excess of 60 dBA Ldn at residential façades. • Limiting the hours of noise-generating activities, such as maintenance, loading and unloading, and drive-through operations, to 7:00 AM to 10:00 PM, where potential noise conflicts exist. 	PPD&C Retain acoustical consultant to prepare design-level study.	During detailed project planning or project design prior to project approval.	During project design phase.
	MM NOI-2b: Noise considerations shall be taken into account during the design of the multi-purpose stadium and any other noise-generating event facilities. The project proponents shall perform a design-level study, conducted by a qualified acoustical professional, during the project level analysis to define reasonable and feasible noise mitigation for noise-sensitive receptors that are predicted to be exposed to noise levels that exceed the noise significance thresholds (60 dBA Ldn for residences, schools, and libraries, and 70 dBA Ldn for parks).	PPD&C Review project design for compliance with recommendations in study. Revise as needed to incorporate noise control features.	During detailed project planning or project design prior to project approval.	Prior to final project approval.

Significant Impact	Mitigation Measure	Monitoring/Reporting Responsibility and Action(s)	Mitigation Timing	Monitoring Schedule
NOISE (continued)				
Alt 1 – Impact NOI-3: Construction of the Proposed Action could expose existing off-site and future on-site noise-sensitive receptors to elevated noise levels.	MM NOI-3: Prior to initiation of campus or community construction, the project proponents shall approve a construction noise mitigation program including but not limited to the following. <ul style="list-style-type: none"> • Construction activities within 500 feet of any residences shall be restricted to between the hours of 7:00 AM and 6:00 PM on weekdays and Saturdays with no construction on Sundays and holidays. • All noise-producing project equipment and vehicles using internal combustion engines shall be equipped where appropriate with exhaust mufflers and air-inlet silencers in good operating condition that meet or exceed original factory specifications. • Mobile or fixed “package” equipment (e.g., arc-welders, air compressors) shall be equipped with shrouds and noise control features that are readily available for that type of equipment. • All mobile or fixed noise-producing equipment used on the project that is regulated for noise output by local, state or federal agency shall comply with such regulation while engaged in project-related activities. • Electrically powered equipment shall be used instead of pneumatic or internal combustion powered equipment, where practicable. • Material stockpiles, mobile equipment staging, construction vehicle parking, and maintenance areas shall be located as far as practicable from noise-sensitive land uses. • Stationary noise sources such as generators or pumps shall be located away from noise-sensitive land uses as feasible. • The use of noise-producing signals, including horns, whistles, alarms, and bells, shall be for safety warning purposes only. No project-related public address loudspeaker, two-way radio, or music systems shall be audible at any adjacent noise-sensitive receptor except for emergency use. • The erection of temporary noise barriers shall be considered where project activity is unavoidably close to noise-sensitive receptors. 	PPD&C Develop construction noise mitigation program and adopt as part of standard construction contract specifications. Inspect construction sites to verify that measures are being implemented.	Prior to and during construction.	Confirm and document during construction.

Significant Impact	Mitigation Measure	Monitoring/Reporting Responsibility and Action(s)	Mitigation Timing	Monitoring Schedule
NOISE (continued)				
Alt 1 – Impact NOI-3 (continued)	<ul style="list-style-type: none"> The noisiest construction operations shall be scheduled to occur together to avoid continuing periods of the greatest annoyance, wherever possible. Construction vehicle trips shall be routed as far as practical from existing residential uses. The loudest campus construction activities, such as demolition, blasting, and pile driving, shall be scheduled during summer, Thanksgiving, winter, and spring breaks when fewer people would be disturbed by construction noise. Whenever possible, academic, administrative, and residential areas that will be subject to construction noise shall be informed a week before the start of each construction project. 			
Alt 1 – Impact NOI-4: Pile driving activities during construction could expose nearby receptors to perceptible levels of groundborne vibration.	<p>MM NOI-4a: The project proponents shall avoid impact pile driving where possible in vibration-sensitive areas. Drilled piles or the use of vibratory pile driving will be used where geological conditions permit their use. For impact pile driving activities occurring within 50 feet of typical structures, limit groundborne vibration due to construction activities to 0.50 inch/second, ppv (limit of potential for damage to typical structures) in the vertical direction at sensitive receptors. Since in many cases the information available during the preliminary engineering phase would not be sufficient to define specific vibration mitigation measures, the project proponents shall describe and commit to a mitigation plan to minimize construction vibration damage using all feasible means available. Thresholds for individual structures could be established based on the assessment of each structure's ability to withstand vibration, and vibration monitoring could be conducted to ensure compliance with the vibration thresholds.</p>	<p>PPD&C</p> <p>Develop construction vibration mitigation program and adopt as part of standard construction contract specifications.</p> <p>Inspect construction sites to verify that measures are being implemented.</p>	Prior to and during construction.	Document compliance in project file upon completion of construction.

Significant Impact	Mitigation Measure	Monitoring/Reporting Responsibility and Action(s)	Mitigation Timing	Monitoring Schedule
NOISE (continued)				
Alt 1 – Impact NOI-4 (continued)	MM NOI-4b: For construction adjacent to highly sensitive uses such as laboratories, apply additional measures as feasible, including advance notice to occupants of sensitive facilities to ensure that precautions are taken in those facilities to protect ongoing activities from vibration effects.	PPD&C Ensure that construction vibration mitigation program include precautions for highly sensitive uses as described. Inspect construction sites to verify that precautions are being implemented.	Prior to and during construction.	Document compliance in project file upon completion of construction.
Alt 1 – Impact NOI-5: New on-site noise-sensitive land uses, such as Campus and University Community residences, could be exposed to noise levels exceeding noise thresholds.	MM NOI-5a: For new noise-sensitive Campus and University Community development, noise considerations shall be taken into account during initial site planning, in order to maximize shielding by the planned structures or other on-site features. In areas where new residential development or noise-sensitive park uses would be developed adjacent to noise-generating project development or along Campus Parkway, the project proponent shall retain a qualified acoustical professional to prepare a design level study to define reasonable and feasible noise mitigation to reduce exterior and interior noise levels in noise-sensitive areas to comply with the land use compatibility guidelines (60 dBA Ldn exterior and 45 dBA Ldn interior for residences). The identified mitigation shall be included in the design of the project. Measures that can be implemented to achieve reductions in noise levels include but are not limited to: <ul style="list-style-type: none"> Using site planning to minimize noise in parks and residential outdoor activity areas by locating these areas as far as possible from noise sources or at locations behind buildings. 	PPD&C Retain acoustical consultant to prepare design-level study and noise mitigation plan.	During detailed project planning or project design prior to project approval.	During project design phase.

Significant Impact	Mitigation Measure	Monitoring/Reporting Responsibility and Action(s)	Mitigation Timing	Monitoring Schedule
NOISE (continued)				
Alt 1 – Impact NOI-5 (continued)	<ul style="list-style-type: none"> Paving Campus Parkway section within the project site with a 'quiet' pavement type such as a porous Open-Grade Asphalt Concrete with fine aggregate size. Noise reductions of 3 to 4 dBA below noise levels associated with 'Average' pavements have been achieved using a 'quiet' pavement. Using noise barriers or berms to acoustically shield these uses where site planning methods are not sufficient to reduce noise in noise-sensitive exterior use areas to below 60 dBA Ldn. Providing mechanical ventilation so that windows can remain closed to maintain interior noise levels below 45 dBA Ldn where exterior noise levels at residential façades are predicted to exceed 60 dBA Ldn. Providing sound-rated windows and applying other noise-reducing construction methods where exterior noise levels at residential facades are predicted to exceed 65 dBA Ldn. 	PPD&C Review project design for compliance with recommendations in study. Revise as needed to incorporate noise control features.	During detailed project planning or project design prior to project approval.	Prior to final project approval.
PUBLIC SERVICES AND RECREATION				
Alt 1 – Impact PUB-1: The Proposed Action would increase demand for law enforcement services and would require the construction of new facilities.	MM PUB-1: The Campus shall maintain a minimum ratio of 0.7 officer per 1,000 population.	PPD&C Document compliance with mitigation measure.	During operation.	Annually.

Significant Impact	Mitigation Measure	Monitoring/Reporting Responsibility and Action(s)	Mitigation Timing	Monitoring Schedule
PUBLIC SERVICES AND RECREATION (continued)				
Alt 1 – Impact PUB-6: The Proposed Action would increase the use of Lake Yosemite Regional Park which could accelerate physical deterioration of park facilities.	MM PUB-6a: The University shall work with the County to develop a program for joint use of on campus sports, recreational, and parking facilities.	PPD&C Work with County to implement mitigation measures.	During detailed project planning or project design prior to project approval.	Following completion of the environmental review process for new park facilities, if mitigation costs are identified in connection with those facilities proposed because of the implementation of the 2009 LRDP.
	MM PUB-6b: The University shall work with the County to avoid physical deterioration of existing facilities at Lake Yosemite Regional Park, and/or improve park facilities within the existing park site as necessitated by the increased uses associated with development of the Campus.	PPD&C Work with County to implement mitigation measures.	During detailed project planning or project design prior to project approval.	
	MM PUB-6c: The University will pay its fair share of the cost of necessary improvements to the regional park. The University's share of funding will be based on the percentage that on campus residential population represents of the total population in eastern Merced County at the time that an improvement is implemented.	PPD&C Negotiate with County to determine fair share contribution toward feasible and required environmental mitigation measures for improvements to Lake Yosemite Regional Park.	During detailed project planning or project design prior to project approval.	
	MM PUB-6d: In recognition of the sensitive resources present on lands immediately adjacent to the regional park, all regional park improvement projects that are implemented by the County within 250 feet of the park's eastern boundary pursuant to Mitigation Measures PUB-6b and PUB-6c above, will implement mitigation measures to avoid and minimize indirect effects on biological resources. These measures shall be based on and as effective as the measures in the Conservation Strategy to control indirect impacts to biological resources.	PPD&C Document compliance with mitigation measure in conjunction with Mitigation Measures PUB-6b and PUB-6c above.	During detailed project planning or project design prior to project approval.	Document compliance with mitigation measures prior to approval of improvements of the regional park.

Significant Impact	Mitigation Measure	Monitoring/Reporting Responsibility and Action(s)	Mitigation Timing	Monitoring Schedule
TRANSPORTATION AND TRAFFIC				
Alt 1 – Impact TRANS-1: The Proposed Action would contribute 1 percent or more to the traffic growth projected for 18 roadway segments planned to be widened in the future, cause the LOS of two study intersections to deteriorate to unacceptable levels, and result in a significant increase in delay at one intersection.	<p>MM TRANS-1A: <u>Campus Traffic Mitigation Program (CTMP)</u>. The Campus Traffic Mitigation Program (CTMP) is designed to mitigate off-site impacts associated with the roadway segments and intersections affected by the development of the Campus through full build-out, as described in the 2009 LRDP. It includes a combined approach of (1) transportation measures to reduce peak-hour trips, and (2) monetary contributions to roadway improvements identified as necessary to mitigate the impacts of the Proposed Action. CEQA provides that an agency can mitigate its contribution to local and regional environmental impacts by contributing its proportional share of funding to mitigation measures designed to alleviate the identified impact (State CEQA Guidelines Section 15130(a)(3)).</p> <p>The portion of the CTMP that provides for monetary contributions consists of specific mitigation measures for certain roadway segments and intersections adjacent to the Campus (including Lake Road between Yosemite Avenue and Bellevue Road and Bellevue Road between G Street and Lake Road) that are anticipated to reach capacity soon after the Campus reaches 10,000 full-time equivalent (FTE) students. The University anticipates that the County of Merced (or the City of Merced if annexed) may plan and implement improvements to these segments and intersections before the Campus reaches 10,000 students. The University also anticipates that the County (or the City) may choose to construct new regional facilities (such as the Campus Parkway) or oversize new facilities in lieu of addressing capacity issues by more limited improvements on the affected segments (e.g., widening Lake Road). To address these issues, the CMTP contains detailed provisions for the University's share of funding these anticipated improvements upon the notice to proceed for construction. To the extent that the County (or the City) chooses not to proceed with the specific improvements identified in MM TRANS-1A-4, the University will address campus impacts under MM TRANS-1A-5.</p> <p>The CTMP will consist of the following elements/measures:</p>			

Significant Impact	Mitigation Measure	Monitoring/Reporting Responsibility and Action(s)	Mitigation Timing	Monitoring Schedule
TRANSPORTATION AND TRAFFIC (continued)				
Alt 1 – Impact TRANS-1 (continued)	MM TRANS-1A-1: Trip Reduction Measures <u>Travel Demand Management.</u> To reduce on- and off-campus vehicle trips and resulting impacts, the University will implement a range of Transportation Demand Management (TDM) strategies. TDM strategies will include measures to increase transit and shuttle use, encourage alternative transportation modes including bicycle transportation, implement parking policies that reduce demand, and implement other mechanisms that reduce vehicle trips to and from the campus and community. <u>Transit Enhancement.</u> To enhance transit systems serving the Campus and University Community, the University will work cooperatively with the City of Merced, County of Merced, Cat Tracks, The Bus, StaRT, YARTS, and other local agencies to coordinate service routes with existing and proposed shuttle and transit programs.	PPD&C Report on provision of TDM programs, transit services, and usage of these programs and services.	Throughout LRDP development.	At intervals of 1,500 FTE student growth, relative to 2009 LRDP baseline.
	<u>Sustainability Measures.</u> The University shall review individual projects proposed under the 2009 LRDP for consistency with UC sustainable transportation policy and UC Merced TDM strategies set forth in the 2009 LRDP to ensure that bicycle and pedestrian improvements, alternative fuel infrastructure, transit stops, and other project features that promote alternative transportation are incorporated to the extent feasible. The University shall monitor the performance of campus TDM strategies through annual surveys.	PPD&C Report on sustainable elements of each building project.	Throughout LRDP development.	Prior to design approval of each building project.
	<u>Campus Housing.</u> The University will continue to pursue the implementation of affordable on-campus student housing to reduce peak-hour commuter trips to the campus. The University's goal is for 50 percent of student population to live on campus.	PPD&C Plan for provision of new housing projects to keep pace with projected student body growth. Report on existing and projected housing provision on a yearly basis.	Throughout LRDP development.	Report on a yearly basis.

Significant Impact	Mitigation Measure	Monitoring/Reporting Responsibility and Action(s)	Mitigation Timing	Monitoring Schedule
TRANSPORTATION AND TRAFFIC (continued)				
Alt 1 – Impact TRANS-1 (continued)	MM TRANS-1A-2: Campus Traffic Monitoring The University will monitor trip generation resulting from the campus development under the 2009 LRDP to track the actual trip generation relative to the projections in this EIS/EIR. The University will conduct traffic cordon counts of the campus traffic with each 1,500 person increase in student population measured by three-term average FTE students enrollment increases with 2007-08 as the base year. The University will report the findings to the City and the County, and these findings will be used to calculate the University's proportional share of responsibility to fund local transportation improvements as described below.	PPD&C Conduct AM and PM peak period traffic counts at Campus gateway(s) and report trip generation rate per FTE student, relative to Draft EIS/EIR rate.	Throughout LRDP development.	At intervals of 1,500 FTE student growth, relative to 2009 LRDP baseline.
	MM TRANS-1A-3: Determination of Proportional Share Attributable to Campus The University will monitor its traffic based on MM TRANS-1A-2 above and use the data to calculate its proportional share of the cost of each improvement at each location noted in Table 4.13-10. The Campus's proportional share of each improvement will be determined by applying the actual trip generation rate at the time that the improvement is needed. The formula to calculate the proportional share will be: $(\text{Actual trip generation rate on a per student basis}) / (\text{the projected trip generation rate}) \times \text{the projected percentages in Table 4.13-10}$ The use of the actual trip generation rate may increase or decrease the Campus's proportional share compared to the projected percentages in Table 4.13-10.	PPD&C Report proportional share based on monitored trip generation, using improvement cost data as described.	Throughout LRDP development.	At intervals of 1,500 FTE student growth, relative to 2009 LRDP baseline.

Significant Impact	Mitigation Measure	Monitoring/Reporting Responsibility and Action(s)	Mitigation Timing	Monitoring Schedule
TRANSPORTATION AND TRAFFIC (continued)				
Alt 1 – Impact TRANS-1 (continued)	<p>MM TRANS-1A-4: Monetary Contributions to Roadway Improvements Adjacent to the Campus</p> <p>Scope of Mitigation. The University will commit to pay its proportional share of the cost of improvements to three intersections and two roadway segments that are adjacent to the Campus at the time that improvements to these facilities are triggered, as indicated below:</p> <p>Construct Campus Parkway between Yosemite Avenue and the Campus - when the County of Merced (or the City of Merced if annexed) demonstrates to the University that Lake Road from Yosemite Avenue to Bellevue Road is at 90% of its capacity (as described in Table 4.13-6) and that the need for improvement is imminent.</p> <p>Widen Bellevue from 2 to 4 lanes from G Street to Lake Road - when the County of Merced (or the City of Merced if annexed) demonstrates to the University that Bellevue Road between G Street and Lake Road is at 90% of its capacity (as described in Table 4.13-6) and that the need for improvement is imminent. (Future widening of Bellevue Road from 4 to 6 lanes will be mitigated pursuant to MM TRANS-1-5).</p> <p>Intersections of Bellevue Road/Lake Road, Myers Gate/Lake Road, and Yosemite Avenue/Lake Road - when the County of Merced (or the City of Merced if annexed) demonstrates that the intersections listed above are approaching an unacceptable Level of Service (LOS) and the need for an improvement is imminent.</p> <p>Contribution of Campus' Proportional Share. At each of these locations, the University's proportional share will be estimated based on the percentages reported in Table 4.13-10 which represent the projected proportional share adjusted per the discussion under Determination of Proportional Share Attributable to Campus, above.</p>	<p>PPD&C</p> <p>(1) Internally commit proportional share funding;</p> <p>(2) Pay affected jurisdiction.</p>	<p>(1) When affected jurisdiction programs each project, provides a construction cost estimate, and completes a full project funding plan;</p> <p>(2) Prior to project construction.</p>	<p>As each improvement project is programmed, cost estimates are prepared, and full funding plans are prepared.</p>

Significant Impact	Mitigation Measure	Monitoring/Reporting Responsibility and Action(s)	Mitigation Timing	Monitoring Schedule
TRANSPORTATION AND TRAFFIC (continued)				
Alt 1 – Impact TRANS-1 (continued)	<p><u>Contribution of University Community's Proportional Share.</u> The University will advance the proportional share of the cost of the specific improvements included in this section associated with the University Community (as identified on Table 4.-13.10) if, prior to the issuance of any entitlements for development in the University Community (including but not limited to any specific plan, tentative map or permit), the County (or the City) enacts an enforceable fee program to collect sufficient funds from all developers in the University Community to fully reimburse the University for any amount overpaid beyond its proportional share. The fee program must be updated annually to ensure that sufficient fees are collected to fully reimburse the University for the amount advanced, including interest associated with any financing of the cost of the University Community's share of the improvements. The fee program shall provide that the fees collected from development within University Community for purpose of paying for the improvements in this section shall be paid directly to the University. If a fee mechanism has not been adopted prior to the issuance of a notice to proceed for an improvement, the University's commitment to advance the funding under this section will not arise until such program has been adopted.</p> <p><u>Commitment of Funds.</u> Funding will be internally committed by the University when an improvement project is included in the County (or the City) capital improvement program, and the County (or the City) provides a construction cost estimate and a project funding plan to the University.</p> <p><u>Timing of Mitigation Payments.</u> The funds will be disbursed to the County (or the City) upon issuance of the notice to proceed with construction of the project.</p>			

Significant Impact	Mitigation Measure	Monitoring/Reporting Responsibility and Action(s)	Mitigation Timing	Monitoring Schedule
TRANSPORTATION AND TRAFFIC (continued)				
Alt 1 – Impact TRANS-1 (continued)	<p>MM TRANS-1A-5: Monetary Contributions to Other Roadway Improvements</p> <p><u>Scope of Mitigation.</u> The University will commit to fund its proportional share of the cost of all roadway improvements at the locations shown in Table 4.13-10 and will commit to fund its proportional share of only those planned improvements for roadway segments that are listed in Table 4.13-9 and mitigation for intersections listed in Table 4.13-11. (Improvements to the intersection of Yosemite Avenue and Lake Road, construction of Campus Parkway between Yosemite Avenue and the Campus, and Bellevue Road widening from 2 to 4 lanes are addressed under MM TRANS-1A-4).</p> <p><u>Contribution of Campus' Proportional Share.</u> At each of these locations, the University's proportional share will be estimated based on the percentages reported in Table 4.13-10 which represent the University's proportional share adjusted per the discussion under Determination of Proportional Share Attributable to Campus, above.</p> <p><u>Commitment of Funds.</u> Funding will be internally committed by the University at the point at which an improvement project is included in the County (or the City)'s capital improvement program, and the County (or the City) provides a construction cost estimate and a project funding plan to the University.</p> <p><u>Timing of Mitigation Payments.</u> The funds will be disbursed to the County (or the City) upon issuance of the notice to proceed with construction of the project.</p>	<p>PPD&C</p> <p>(1) Internally commit proportional share funding;</p> <p>(2) Pay affected jurisdiction.</p>	<p>(1) When affected jurisdiction programs each project, provides a construction cost estimate, and completes a full project funding plan;</p> <p>(2) Prior to project construction.</p>	<p>As each improvement project is programmed, cost estimates are prepared, and full funding plans are prepared.</p>

Significant Impact	Mitigation Measure	Monitoring/Reporting Responsibility and Action(s)	Mitigation Timing	Monitoring Schedule
TRANSPORTATION AND TRAFFIC (continued)				
Alt 1 – Impact TRANS-1 (continued)	<p>MM TRANS-1A-6: Alternate Improvements</p> <p>Specific feasible traffic improvements are identified in Tables 4.13-11 and 4.13-9 to mitigate each of the Proposed Action’s significant traffic impacts to a less than significant level. The identified improvements would be planned, designed, and implemented by the City of Merced, Merced County, or other affected jurisdictions. Detailed planning, environmental analysis and engineering studies for some of these improvements have not been completed and the implementing agencies have not committed to all identified improvements. As a result, the final configuration of future transportation improvements may vary from those identified in Tables 4.13-11 and 4-13-9. The University will monitor its traffic based on MM TRANS-1A-2 above and use the data to calculate its incremental responsibility towards the Campus’s projected share of each improvement location noted in Table 4.13-10. If any improvement described herein is found to be ineffective or infeasible, and alternative improvements are determined to be required to achieve an acceptable LOS, the University will work in collaboration with the County or the City to implement alternative improvements.</p>	<p>PPD&C</p> <p>Consult with County and City staff at each 1,500-student monitoring stage, to determine whether alternate improvements are under consideration, and discuss efficacy of the alternate improvements.</p>	Throughout LRDP development.	At each 1,500-student monitoring stage.

Significant Impact	Mitigation Measure	Monitoring/Reporting Responsibility and Action(s)	Mitigation Timing	Monitoring Schedule
HYDROLOGY AND WATER QUALITY				
Cumulative Impact HYD-3: Development of the Campus and University Community, in conjunction with other past, present, and reasonably foreseeable future development in the project area, would not substantially interfere with groundwater recharge but would deplete groundwater supplies resulting in an overdraft of the regional groundwater aquifer.	Cumulative MM HYD-3a: The University shall support MAGPI in pursuing and securing cooperative arrangements with state and local agencies for purposes of expanding the basin's conjunctive use capabilities.	PPD&C Coordinate with MAGPI.	Prior to and during development of Campus.	Confirm that cooperative agreements have been secured.
	Cumulative MM HYD-3c: To reduce its demand for water, the Campus shall implement an aggressive water conservation program which will consist of the following elements: <ul style="list-style-type: none"> Incorporate water-efficient landscaping practices in all new landscape installations. Water-conservation landscaping practices shall include, but not be limited to, use of water-efficient plants, temporary irrigation systems for plant establishment areas where mature plants will be able to survive without regular irrigation, grouping of plants according to water requirements, design of planting areas to maximize irrigation pattern efficiency, and mulch covering in planting areas. 	PPD&C Incorporate water efficient landscaping practices in all new landscape installation.	Prior to project design approval.	Confirm that all landscaping meets new standard.
	<ul style="list-style-type: none"> Continue to install low flow plumbing fixtures in all new buildings. 	PPD&C to continue installing low flow plumbing fixtures.	When plumbing fixtures are installed.	Document all new fixtures are low-flow.

Significant Impact	Mitigation Measure	Monitoring/Reporting Responsibility and Action(s)	Mitigation Timing	Monitoring Schedule
HYDROLOGY AND WATER QUALITY (continued)				
	<ul style="list-style-type: none"> As new technologies become available, the Campus shall conduct pilot programs for high-efficiency plumbing fixtures including, but not limited to, dual-flush toilets. If a piloted technology proves to be successful (i.e., high-efficiency fixtures that are effective in water savings and do not require more maintenance than the existing standard), the Campus shall revise its standards to require use of the fixtures in all new buildings and in existing buildings as existing fixtures need to be replaced. 	PPD&C Implement pilot programs. Revise campus standards as warranted.	Pilot programs ongoing. Depends on results of pilot programs.	Document results of program. Confirm standards have been revised.
	<ul style="list-style-type: none"> Require that new contracts for washing machines in student residences be certified by the Consortium on Energy Efficiency to have a water factor of 5.5 or less or meet an equivalent standard. New washing machines purchased for use in athletic facilities shall meet applicable standards for water efficiency for institutional machines. 	PPD&C Specifications for washing machines to require that standard is met.	When new machines are purchased.	Confirm new machines meet standards and document.
	<ul style="list-style-type: none"> Within one year following approval of the 2009 LRDP, the Campus shall implement a water conservation education program for campus residents. This will include but not be limited to: <ul style="list-style-type: none"> Distribution to residents of employee housing of education materials covering topics such as basic home water conservation practices, plumbing retrofits and replacements, and strategies to conserve landscape irrigation. 	PPD&C Provide residents with information.	Implement water conservation programs with residents.	Confirm and document that information has been provided.
	<ul style="list-style-type: none"> Designation of a staff member who will be responsible for developing and implementing a water conservation education and awareness program to reduce water consumption in student residences, dining halls, and student affairs facilities. 	Designate a staff member as a water conservation educator.	Within one year of LRDP approval.	Confirm staff member has been designated.
	<ul style="list-style-type: none"> Within two years following approval of the 2009 LRDP, the Campus shall initiate a study on feasible measures for utilization of reclaimed water (including rainwater, grey water, cooling tower blow down water and/or recycled water) in new development. Potential uses of reclaimed water include cooling, irrigation, toilet flushing, and industrial water. The study shall contain a plan to utilize reclaimed water in new development as feasible and effective. 	Initiate study of reclaimed water as specified.	Within two years of LRDP approval.	Document initiation of reclaimed water study.

Significant Impact	Mitigation Measure	Monitoring/Reporting Responsibility and Action(s)	Mitigation Timing	Monitoring Schedule
	<ul style="list-style-type: none"> The Campus shall, at intervals of no more than five years during the term of the 2009 LRDP, conduct roundtable discussions with representatives of relevant campus departments, and conduct additional studies of new technologies as needed to identify feasible and effective water conservation measures for implementation on the Campus during the subsequent five year period. The following are among the measures that shall be considered: <ul style="list-style-type: none"> Retrofitting existing water meters such that building use and irrigation are separately metered. Replacing natural turf on athletic fields with artificial turf. Installing timers on showers in student residences. 	Discuss potential effective water conservation measures with the Campus departments that could be studied for implementation.	Every five years after approval of LRDP.	Document results of discussions.

Significant Impact	Mitigation Measure	Monitoring/Reporting Responsibility and Action(s)	Mitigation Timing	Monitoring Schedule
UTILITIES AND SERVICE SYSTEMS				
Cumulative Impact UTILS-1: Development of the Campus and University Community, in conjunction with other past, present, and reasonably foreseeable future development in the project area, would not require the construction of new water supply facilities that would result in significant environmental impacts. The cumulative development would result in a substantial increase in demand for water which potentially could result in significant environmental impacts.	Cumulative MM UTILS-1a: The University shall implement Cumulative Mitigation Measure HYD-3a.	See actions for Cumulative MM HYD-3a.		

Significant Impact	Mitigation Measure	Monitoring/Reporting Responsibility and Action(s)	Mitigation Timing	Monitoring Schedule
UTILITIES AND SERVICE SYSTEMS (continued)				
Cumulative Impact UTILS-2: Development of the Campus and University Community, in conjunction with other past, present, and reasonably foreseeable future development in the project area, would result in a significant cumulative impact on wastewater collection and treatment facilities.	Cumulative MM UTILS-2a: The University shall continue to monitor and minimize the total amount of wastewater discharged from the site.	PPD&C Monitor amount of wastewater discharged. If unexpected increases in wastewater volume occur over time, minimize discharge.	Ongoing	Document discharge amount of wastewater annually.
	Cumulative MM UTILS-2b: The University shall evaluate the feasibility of developing a recycled water plant on the Campus or in Community North to further reduce wastewater flows discharged to the City's sewer system.	See actions for Cumulative MM HYD-3c.		

Table 2
Mitigation Monitoring and Reporting Program
UCM 2020 Project

Significant Impact	Mitigation Measure	Monitoring/Reporting Action(s)	Mitigation Timing	Monitoring Schedule
AESTHETICS				
UCM 2020 Impact AES-1: Development under the UCM 2020 Project would affect scenic vistas.	UCM 2020 MM AES-1: Implement Program Level Mitigation Measures AES-1a and -1b.	See actions for Program Level Mitigation Measures AES-1a and -1b above.		
UCM 2020 Impact AES-2: Development under the UCM 2020 Project would substantially alter the visual quality and character of the site and its surroundings.	UCM 2020 MM AES-2: Implement Program Level Mitigation Measure AES-3.	See actions for Program Level Mitigation Measure AES-3.		
AIR QUALITY				
UCM 2020 Impact AQ-2: The UCM 2020 Project would result in operational emissions that would violate an air quality standard or contribute substantially to an existing or projected air quality violation.	UCM 2020 MM AQ-2: Implement Program Level Mitigation Measures AQ-2a through AQ-2c.	See actions for Program Level Mitigation Measures AQ-2a through AQ-2c.		

Significant Impact	Mitigation Measure	Monitoring/Reporting Action(s)	Mitigation Timing	Monitoring Schedule
AIR QUALITY (continued)				
UCM 2020 Impact AQ-3: The UCM 2020 Project would result in a cumulatively considerable net increase of a criteria pollutant for which the project region is nonattainment under an applicable federal or state ambient air quality standard (including releasing emissions, which exceed quantitative thresholds for ozone precursors).	UCM 2020 MM AQ-3: Program Level Mitigation Measures AQ-2 would apply to this impact. No further mitigation is available.	See actions for Program Level Mitigation Measures AQ-2.		
GEOLOGY AND SOILS				
UCM 2020 Impact GEO-1: Development under the UCM 2020 Project could expose people or structures to increased risk related to ground shaking and seismically induced ground failure, including liquefaction.	UCM 2020 MM GEO-1: Implement Program Level Mitigation Measure GEO-2.	See actions for Program Level Mitigation Measure GEO-2.		

Significant Impact	Mitigation Measure	Monitoring/Reporting Action(s)	Mitigation Timing	Monitoring Schedule
HAZARDS AND HAZARDOUS MATERIALS				
UCM 2020 Impact HAZ-1: Development under the UCM 2020 Project could be located on a site that potentially contains hazardous materials and could create a significant hazard to the public or the environment.	UCM 2020 MM HAZ-1: Implement Program Level Mitigation Measure HAZ-4.	See actions for Program Level Mitigation Measure HAZ-4.		
NOISE				
UCM 2020 Impact NOI-2: Construction of the UCM 2020 Project could expose existing off-site and future on-site noise-sensitive receptors to elevated noise levels and groundborne vibration.	UCM 2020 MM NOI-2a: Implement Program Level Mitigation Measures NOI-3, NOI-4a, and NOI-4b.	See actions for Program Level Mitigation Measures NOI-3, NOI-4a, and NOI-4b.		
PUBLIC SERVICES AND RECREATION				
UCM 2020 Impact PUB-1: The UCM 2020 Project would increase demand for law enforcement services and would require the construction of new facilities.	UCM 2020 MM PUB-1: Implement Program Level Mitigation Measure PUB-1	See actions for Program Level Mitigation Measure PUB-1		

Significant Impact	Mitigation Measure	Monitoring/Reporting Action(s)	Mitigation Timing	Monitoring Schedule
PUBLIC SERVICES AND RECREATION (continued)				
UCM 2020 Impact PUB-2: The UCM 2020 Project would increase the use of Lake Yosemite Regional Park, which could accelerate physical deterioration of park facilities.	UCM 2020 MM PUB-2: Implement Program Level Mitigation Measures PUB-6a through PUB-6d.	See actions for Program Level Mitigation Measures PUB-6a through PUB-6d.		
TRANSPORTATION AND TRAFFIC				
UCM 2020 Impact TRANS-2: With the addition of project traffic, the LOS of three of the study intersections would deteriorate to unacceptable levels under Existing Plus UCM 2020 Project conditions.	UCM 2020 MM TRANS-2: The Campus shall implement Program Level Mitigation Measure TRANS-1, pursuant to which it will monitor traffic growth related to the campus and pay its proportional share of the cost of the required improvement.	See actions for Program Level Mitigation Measure TRANS-1		
UCM 2020 Impact TRANS-3: Implementation of the UCM 2020 Project would result in an exceedance of the LOS threshold along local roadway segments under 2020 Plus UCM 2020 Project conditions.	UCM 2020 MM TRANS-3: The Campus shall implement Program Level Mitigation Measure TRANS-1, pursuant to which it will monitor traffic growth related to the campus and pay its proportional share of the cost of the above listed improvement.	See actions for Program Level Mitigation Measure TRANS-1		