

TABLE OF CONTENTS

Section 6	Summary Of Impacts and Mitigation Measures.....	6-1
Section 7	Changes to the Draft EIR.....	7-1
7.1	Changes to Volume 1 of the Draft EIR.....	7-1
7.1.A	Executive Summary	7-1
7.1.B	Project Description.....	7-1
7.1.C	Demographic Characteristics	7-2
7.1.D	Agricultural Resources.....	7-4
7.1.E	Air Quality.....	7-5
7.1.F	Biological Resources.....	7-9
7.1.G	Geology, Soils, and Seismicity.....	7-18
7.1.H	Hydrology and Water Quality.....	7-19
7.1.I	Noise.....	7-20
7.1.J	Population, Employment, and Housing.....	7-21
7.1.K	Public Services	7-21
7.1.L	Traffic, Circulation, and Parking.....	7-22
7.1.M	Utilities.....	7-28
7.2	Changes to Volume 2 of the Draft EIR.....	7-30
7.2.A	Summary	7-30
7.2.B	Environmental Setting, Impacts, and Mitigation.....	7-30

Tables

Table 6-1	Summary of Impacts and Mitigation Measures in the EIR
Table 6-2	Summary of Impacts and Mitigation Measures for Phase 1 Campus

Table 6-1 presents a summary of (1) environmental impacts of the proposed project, (2) their level of significance prior to mitigation, (3) project-specific mitigation measures, and (4) the level of significance with mitigation. Table 6-2 presents a summary of impacts and mitigation measures with respect to the Phase 1 Campus. Section 7 of this Final EIR provides an explanation of additional mitigation measures that have been added and other changes that have been made to these tables.

**TABLE 6-1
SUMMARY OF IMPACTS AND MITIGATION MEASURES IN THE EIR**

Impact	Level of Significance Prior to Mitigation ¹	Mitigation Measures	Level of Significance Following Mitigation ¹	
4.1 Aesthetics				
4.1-1	Implementation of the LRDP could affect scenic vistas. This impact is considered <i>less than significant</i> .	LS	<i>4.1-1 Major vehicular and pedestrian transportation corridors on-campus should be located and designed to provide views of the Sierra Nevada. (Applicability-project level)</i>	LS
4.1-2	Implementation of the LRDP could affect scenic resources. This impact is considered <i>less than significant</i> .	LS	<i>No mitigation required.</i>	LS
4.1-3	Implementation of the LRDP would affect existing visual character and quality of the site and its surroundings. This impact is considered <i>significant</i> .	S	<i>No mitigation available.</i>	SU
4.1-4	Lighting of the buildings and other facilities on the proposed campus would create a new source of substantial light or glare. This is considered to be a <i>significant</i> impact.	S	<i>4.1-4 All outdoor lighting should be focused and directed to the specific location (e.g. roads, walkways), be shielded to avoid the production of glare, minimize up-light, and light spill. All light fixtures shall be located, aimed, or shielded so as to minimize stray light trespassing across property boundaries onto Lake Yosemite Regional Park and other sensitive areas (Applicability-project level).</i>	SU
4.1-5	Implementation of the LRDP together with cumulative development in the vicinity will change the visual character of the area. This impact is considered <i>significant</i> .	S	<i>No mitigation available.</i>	SU
4.1-6	Implementation of the LRDP together with cumulative development in the vicinity will not result in a substantial adverse change to the visual quality of the	LS	<i>No mitigation required.</i>	LS

LS: Less than significant; NI: No impact; PS: Potentially significant; S: Significant; SU: Significant and Unavoidable

Impact		Level of Significance Prior to Mitigation ¹	Mitigation Measures	Level of Significance Following Mitigation ¹
	area. This impact is considered <i>less than significant</i> .			
4.1-7	Implementation of the LRDP together with cumulative development in the vicinity will create new sources of light and glare that could affect nighttime views in the area. This impact is considered <i>significant</i> .	S	<i>See mitigation measure 4.1-4.</i>	SU
4.1-8	Implementation of the LRDP together with cumulative development in the vicinity could adversely affect scenic vistas and scenic resources. This impact is considered <i>significant</i> .	S	<i>No mitigation available.</i>	SU
4.2 Agricultural Resources				
4.2-1	Implementation of the LRDP would result in the conversion of about 684 acres of grazing land into nonagricultural uses. This impact is considered to be <i>less than significant</i> .	LS	<i>No mitigation required.</i>	LS
4.2-2	Implementation of the LRDP would not substantially conflict with existing zoning for agricultural use. This impact is considered to be <i>less than significant</i> .	LS	<i>No mitigation required.</i>	LS
4.2-3	Cumulative development will result in the conversion of prime farmland, farmland of statewide importance, and unique farmland to nonagricultural use. This is a <i>significant</i> cumulative impact.	S	<i>No mitigation available.</i>	SU
4.3 Air Quality				
4.3-1	Construction activities as part of development allowed under the LRDP could result in short term generation of fugitive dust (PM ₁₀). This is considered to be a <i>potentially significant</i> impact.	PS	4.3-1(a) <i>The Campus shall include in all construction contracts the measures specified in SJVUAPCD 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:</i>	LS

LS: Less than significant; NI: No impact; PS: Potentially significant; S: Significant; SU: Significant and Unavoidable

	Impact	Level of Significance Prior to Mitigation ¹	Mitigation Measures	Level of Significance Following Mitigation ¹
4.3-1 cont'd			<ul style="list-style-type: none"> • <i>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.</i> • <i>All on-site unpaved roads and off-site unpaved access roads shall be effectively stabilized of dust emissions using water or chemical stabilizer/suppressant.</i> • <i>All land clearing, grubbing, scraping, excavation, land leveling, grading, cut & fill, and demolition activities shall be effectively controlled of fugitive dust emissions utilizing application of water or by presoaking.</i> • <i>With the demolition of buildings up to six stories in height, all exterior surfaces of the building shall be wetted during demolition.</i> • <i>When materials are transported off-site, all material shall be covered, effectively wetted to limit visible dust emissions, or at least six inches of freeboard space from the top of the container shall be maintained.</i> • <i>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</i> 	

LS: Less than significant; NI: No impact; PS: Potentially significant; S: Significant; SU: Significant and Unavoidable

Impact		Level of Significance Prior to Mitigation ¹	Mitigation Measures	Level of Significance Following Mitigation ¹
4.3-1 cont'd			<p><i>limit the visible dust emissions.) (Use of blower devices is expressly forbidden.)</i></p> <ul style="list-style-type: none"> • <i>Following the addition of materials to, or the removal of materials from, the surface of outdoor storage piles, said piles shall be effectively stabilized of fugitive dust emissions by utilizing sufficient water or chemical stabilizer/suppressant (Applicability-project level).</i> <p>4.3-1(b) <i>The campus will include in construction contracts for large construction projects near sensitive receptors the following control measures characterized by the SJVAUPCD as enhanced and optional control measures:</i></p> <ul style="list-style-type: none"> • <i>Limit traffic speeds on unpaved roads to 15 mph;</i> • <i>Install sandbags or other erosion control measures to prevent silt runoff to public roadways from sites with a slope greater than one percent; and</i> • <i>To the extent feasible, limit area subject to excavation, grading, and other construction activity at any one time (Applicability-project level).</i> 	
4.3-2	Construction activities and development allowed under the LRDP would generate increased levels of CO, O ₃ precursors (ROG and NO _x), and PM ₁₀ emissions. This could hinder air quality attainment and maintenance efforts even though those emissions were included in air quality planning efforts. This is considered to be a	S	<p>4.3-2(a) <i>Construction Sources</i></p> <ul style="list-style-type: none"> • <i>The following mitigation measures will be implemented to reduce impacts of ozone precursor emissions from construction equipment exhaust.</i> • <i>When feasible, use alternative fuel construction</i> 	SU

LS: Less than significant; NI: No impact; PS: Potentially significant; S: Significant; SU: Significant and Unavoidable

	Impact	Level of Significance Prior to Mitigation ¹	Mitigation Measures	Level of Significance Following Mitigation ¹
4.3-2 cont'd	<i>significant</i> impact at the LRDP level.		<p><i>equipment.</i></p> <ul style="list-style-type: none"> • <i>Minimize idling time to a maximum of 10 minutes when construction equipment is not in use.</i> • <i>To the extent practicable, manage operation of heavy-duty equipment to reduce emissions.</i> • <i>Employ construction activity management techniques such as extending the construction period outside the ozone season of May through October.</i> • <i>Use low-emission on-site station equipment.</i> • <i>Consult with the SJVUAPCD when future projects are proposed as to the best feasible construction equipment control technology at that time.</i> • <i>Construction equipment rated greater than 100 horsepower shall have, to the extent feasible, diesel exhaust controlled by use of catalyst-based diesel particulate filters (Applicability—project level).</i> <p>4.3-2(b) <i>The campus will work with the SJVUAPCD 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. (Applicability-</i></p>	

LS: Less than significant; NI: No impact; PS: Potentially significant; S: Significant; SU: Significant and Unavoidable

	Impact	Level of Significance Prior to Mitigation ¹	Mitigation Measures	Level of Significance Following Mitigation ¹
4.3-2 cont'd			<p><i>program level)</i></p> <p>4.3-2(c) <i>Vehicular Sources</i></p> <p><i>The following measures will be implemented to reduce emissions from vehicles, as feasible.</i></p> <ul style="list-style-type: none"> • <i>Provide pedestrian-enhancing infrastructure to encourage pedestrian activity and discourage vehicle use.</i> • <i>Provide bicycle facilities to encourage bicycle use instead of driving.</i> • <i>Provide transit-enhancing infrastructure to promote the use of public transportation.</i> • <i>Provide facilities to accommodate alternative-fuel vehicles such as electric cars and CNG vehicles to address impacts from contributions to the regional emissions of criteria pollutants.</i> • <i>Improve traffic flows and congestion by timing of traffic signals to facilitate uninterrupted travel (Applicability-program level).</i> <p>4.3-2(d) <i>Area Sources</i></p> <p><i>The following measures will be implemented to reduce emissions from area sources, as feasible.</i></p> <ul style="list-style-type: none"> • <i>Use solar or low-emission water heaters.</i> • <i>Orient buildings to take advantage of solar heating and natural cooling and use passive solar</i> 	

LS: Less than significant; NI: No impact; PS: Potentially significant; S: Significant; SU: Significant and Unavoidable

Impact		Level of Significance Prior to Mitigation ¹	Mitigation Measures	Level of Significance Following Mitigation ¹
4.3-2 cont'd			<p><i>designs.</i></p> <ul style="list-style-type: none"> • <i>Increase wall and attic insulation.</i> • <i>For fireplaces or wood-buring appliances, require low-emitting EPA certified wood-buring appliances, or residential natural gas fireplaces.</i> • <i>Provide electric equipment for landscape maintenance.</i> • <i>Utilize guidance provided by the CARB with respect to selection of landscaping materials that do not produce smog or pollen.</i> • <i>Allow for the use of pellet stoves to reduce emissions from area sources (Applicability-project level).</i> <p>4.3-2(e) <i>Turbines and Boilers</i></p> <p><i>Mitigation is already accounted for by assuming BACT will be applied to these sources.</i></p>	
4.3-3	Development allowed under the LRDP would result in an increase in localized CO concentration from vehicle traffic at intersections but the increase would not result in localized concentrations that would exceed air quality standards. This is a <i>less-than-significant</i> impact.	LS	<i>No mitigation required.</i>	LS
4.3-4	Development allowed under the LRDP would not include sources of odorous emissions, with the exception of a small recycled water facility. This is	LS	<i>No mitigation required.</i>	LS

LS: Less than significant; NI: No impact; PS: Potentially significant; S: Significant; SU: Significant and Unavoidable

Impact		Level of Significance Prior to Mitigation ¹	Mitigation Measures	Level of Significance Following Mitigation ¹
	considered to be a <i>less-than-significant</i> impact.			
4.3-5	Campus occupants and residents in the immediate vicinity of the Campus would not be exposed to significant quantities of toxic air contaminants emitted from uses on the campus. This is considered to be a <i>less-than-significant</i> impact.	LS	<i>No mitigation required.</i>	LS
4.3-6	Development allowed under the LRDP, in conjunction with cumulative development in the region, could hinder air quality attainment and maintenance efforts for criteria pollutants. This is considered to be a <i>significant</i> impact.	S	<i>See Mitigation Measure 4.3-2 (a-e).</i>	SU
4.3-7	Development allowed under the LRDP, in conjunction with cumulative development in the region, would not cause an exceedance of CO standards. This is considered to be a <i>less-than-significant</i> impact.	LS	<i>No mitigation required.</i>	LS
4.3-8	Development allowed under the LRDP, in conjunction with cumulative development in the project vicinity, would not result in significant health risks from emissions of toxic air contaminants. This is considered to be a <i>less-than-significant</i> impact.	LS	<i>No mitigation required.</i>	LS
4.4 Biological Resources				
4.4-1	Development under the LRDP would result in a substantial adverse effect on wetlands delineated using the 1987 USACE delineation manual. This is considered to be a <i>potentially significant</i> impact.	PS	4.4-1(a) <i>The University of California shall develop and implement a Resource Mitigation Program to be reviewed and approved by the USACE, USFWS and CDFG through the state and federal permit processes. The Resource Mitigation Program shall result in the acquisition and preservation of substantial acreages of vernal pool-dominated grassland habitat and other</i>	LS

LS: Less than significant; NI: No impact; PS: Potentially significant; S: Significant; SU: Significant and Unavoidable

Impact	Level of Significance Prior to Mitigation ¹	Mitigation Measures	Level of Significance Following Mitigation ¹
4.4-1 cont'd		<p><i>wetland resources throughout eastern Merced County and the restoration, enhancement or creation of wetland resources within these preserved areas. The Resource Mitigation Program shall be designed to address impacts on wetlands and associated upland habitat and the special status species that depend upon those habitats. With respect to wetlands in particular, the Resource Mitigation Program shall be designed to satisfy a "no net loss of wetland functions" standard in connection with campus development.</i></p> <p><i>The RMP will be carried out by the University in close coordination with the Wildlife Conservation Board (WCB) and other parties.</i></p> <p><i>Areas to be preserved under the Resource Mitigation Program will be protected in perpetuity by conservation easements held by a third party and, in some cases, may include transfer to the University of California Natural Reserve System. The Resource Mitigation Program shall include a plan for the monitoring and management of preserved wetland and upland habitats, based upon adaptive management principles, that ensures the ongoing funding of those efforts (which may be from external sources, such as the WCB or grant funds) and incorporates measures (e.g., grazing management, restrictions on rodenticides, watershed protections and other measures) necessary to maintain the biological diversity and integrity of native flora and fauna relative to existing or enhanced conditions. It is anticipated that direct monitoring and management of preserve</i></p>	

LS: Less than significant; NI: No impact; PS: Potentially significant; S: Significant; SU: Significant and Unavoidable

Impact	Level of Significance Prior to Mitigation ¹	Mitigation Measures	Level of Significance Following Mitigation ¹
4.4-1 cont'd		<p><i>lands by UC (and associated funding obligations) will generally be limited to lands owned or leased by the University, and that monitoring and management of non-UC-controlled preserve properties will be conducted by a third party. The RMP will also include siting, design and construction elements incorporating the various measures described in this EIR to avoid and minimize effects on wetlands and protected species that would otherwise arise from the construction and operation of the Campus (see Section 4.08(D)(2)).</i></p> <p><i>Lands to be acquired for preservation under the Resource Mitigation Program shall be selected in accordance with a number of criteria intended to ensure a broad look at the values and functions of the lands under consideration. These factors shall include, among others, the following:</i></p> <ul style="list-style-type: none"> <i>• Species composition</i> <i>• Species diversity</i> <i>• Density of special status species populations</i> <i>• Proportion of native vs. nonnative species</i> <i>• Utilization of both wetland and upland characteristics by special status species</i> <i>• Utilization as a migration corridor for wildlife species</i> <i>• Concentrations of rare plant populations or important geographic segments of rare plant</i> 	

LS: Less than significant; NI: No impact; PS: Potentially significant; S: Significant; SU: Significant and Unavoidable

	Impact	Level of Significance Prior to Mitigation ¹	Mitigation Measures	Level of Significance Following Mitigation ¹
4.4-1 cont'd			<p><i>populations</i></p> <ul style="list-style-type: none"> • <i>Connectivity with regional conservation efforts</i> • <i>Watershed size</i> • <i>Wetland density</i> • <i>Soil and substrate types</i> • <i>Wetland hydrology</i> • <i>Potential for future direct or indirect impacts</i> <p><i>Preserve areas shall be compatible with requirements imposed by USACE, USFWS and CDFG during the state and federal permit processes.</i></p> <p><i>To satisfy the "no net loss of wetland functions" standard articulated above, the Resource Mitigation Program will include -- in addition to its preservation component -- a variety of wetland enhancement, restoration and creation activities to be conducted within the lands preserved under the Resource Mitigation Program. The RMP will rely on existing USACE guidance and implementation of accepted functional assessment methodologies, such as hydrogeomorphic modeling (HGM) in determining the appropriate combination of compensatory strategies in achieving a no overall net loss of wetlands functions. Mitigation Measures 4.4-1(b) through (d) further describe the proposed wetland compensation strategy targeted at achieving no net loss of wetland functions and to be included in the Resource Mitigation</i></p>	

LS: Less than significant; NI: No impact; PS: Potentially significant; S: Significant; SU: Significant and Unavoidable

	Impact	Level of Significance Prior to Mitigation ¹	Mitigation Measures	Level of Significance Following Mitigation ¹
4.4-1 cont'd			<p><i>Program. Mitigation Measure 4.4-1(b) describes the wetland preservation that would be implemented for all wetland impacts. Mitigation Measure 4.4-1(c) describes proposed enhancement measures, and Mitigation Measure 4.4-1(d) describes the proposed wetland restoration and creation measures.(Applicability - program level)</i></p> <p><i>4.4-1(b) Preservation. The preservation component of the Resource Mitigation Program shall require the preservation of a minimum of 10 acres of vernal pool dominated grasslands for every 1 acre of vernal pool dominated grasslands developed on the proposed campus (10:1). For example, assuming that 800 acres of the Main Campus are fully developed, a total of 8,000 acres of comparable habitat will be preserved under this measure. Although preserved habitat should generally include vernal pool densities within grassland areas that are roughly comparable to those existing within the Main Campus area, vernal pool densities within particular preservation areas may vary from those on the Main Campus provided the overall mitigation program (including creation, restoration and enhancement components) results in satisfaction of the no net loss standard articulated above. (Applicability-program level)</i></p> <p><i>4.4-1(c) Enhancement. The lands preserved under the Resource Mitigation Program will provide opportunities for enhancement of wetland functions and habitat. For example, managed grazing practices have been found to improve the quality of vernal pools. Other examples</i></p>	

LS: Less than significant; NI: No impact; PS: Potentially significant; S: Significant; SU: Significant and Unavoidable

Impact	Level of Significance Prior to Mitigation ¹	Mitigation Measures	Level of Significance Following Mitigation ¹
4.4-1 cont'd		<p><i>include implementation of measures to improve water quality, flood retention and wildlife habitat. Many of these enhancement measures have been included in the terms of the conservation easements already secured through WCB funding and thus generated enhancement benefits. No particular enhancement ratio will be specified in the Resource Mitigation Program. Rather, enhancement opportunities will be evaluated and incorporated into specific preservation efforts as required to satisfy the "no net loss of wetland functions" standard articulated in this Mitigation Measure 4.4-1 (Applicability-program level).</i></p> <p><i>4.4-1(d) Restoration and Creation. The Resource Mitigation Program shall require the creation of new wetlands at a minimum ratio of 1 acre of new wetlands created for every 1 acre of seasonal freshwater marsh wetlands filled under the LRDP (a 1:1 acreage ratio). Created wetlands are generally anticipated to be seasonal freshwater marsh or other seasonal wetland habitats to compensate for impacts to these types of wetland habitats. It is not anticipated that significant vernal pools and swales or clay playa wetlands will be created because of the limited availability of suitable sites and the uncertainties associated with creation of these wetland types. The Resource Mitigation Program will include creation of vernal pools an swales or clay playas as mitigation for impacts to such habitats only if this approach is determined to be feasible and acceptable to the USACE.</i></p>	

LS: Less than significant; NI: No impact; PS: Potentially significant; S: Significant; SU: Significant and Unavoidable

	Impact	Level of Significance Prior to Mitigation ¹	Mitigation Measures	Level of Significance Following Mitigation ¹
4.4-1 cont'd			<p><i>The Resource Mitigation Program will require the establishment of new wetlands within preserved areas, through restoration or creation as described more fully below, as necessary to facilitate achievement (together with preservation and enhancement efforts) of the no net loss of wetland function goal articulated in this Mitigation Measure 4.4-1. To the extent practicable, these restoration/creation efforts will result in 1 acre of newly established wetland for every acre filled (i.e., a minimum of 89 acres of wetland area). Both restoration and creation involve manipulation of existing physical, chemical and/or biological characteristics to establish wetlands. Restoration re-establishes a previously existing wetland that has been destroyed or degraded to the extent that it no longer functions as a wetland. Creation activities seek to establish functioning wetlands where they previously did not exist.</i></p> <p><i>The goal of both restoration and creation efforts is to establish wetlands that are similar to the impacted wetlands in terms of physical and biological characteristics. To the extent that the characteristics of identified mitigation sites allow, the composition of the restored and created wetlands will be roughly proportional to the impacted wetlands in terms of their hydrogeomorphic characteristics and plant communities. Thus, the resulting restored and created wetlands will be “in-kind.” It may not be practicable or possibly desirable to establish certain types of impacted aquatic habitats such as ephemeral channels</i></p>	

LS: Less than significant; NI: No impact; PS: Potentially significant; S: Significant; SU: Significant and Unavoidable

	Impact	Level of Significance Prior to Mitigation ¹	Mitigation Measures	Level of Significance Following Mitigation ¹
4.4-1 cont'd			<p><i>or seasonally saturated wetlands. In those cases, out-of-kind wetland restoration and/or creation would be the preferred approach under the Resource Mitigation Program. Out-of-kind wetland restoration and/or creation may also be preferred under the Resource Mitigation Program if there is insufficient or inadequate land available to satisfy the requirements to successfully restore or create certain types of wetlands.</i></p> <p><i>The wetlands establishment component of the Resource Mitigation Program will focus first on restoration activities. Compensation habitat to be restored must demonstrate acceptable restoration potential. The level of restoration achievable, and feasibility of success, will depend on a number of factors including: the need for grading or fill removal, restorability of the hydrology, soil suitability and presence of intact hardpans or claypans, and availability of suitable seed sources. An ideal site will show evidence of the historic occurrence of vernal pools. In the event restoration sites are unavailable, creation activities would be undertaken to the extent suitable lands are available. To compensate for loss of vernal pool functions, creation efforts will focus first on establishment of vernal pools. If mitigation lands that meet requisite soils, hydrology, and vegetative criteria for vernal pool establishment are unavailable, the University will create, to the extent practicable, seasonal wetlands or emergent marsh habitats as replacement acreage for vernal pools. To the extent restoration/creation at a 1:1 ratio proves impracticable, then the University may</i></p>	

LS: Less than significant; NI: No impact; PS: Potentially significant; S: Significant; SU: Significant and Unavoidable

Impact		Level of Significance Prior to Mitigation ¹	Mitigation Measures	Level of Significance Following Mitigation ¹
4.4-1 cont'd			<p><i>rely on preservation and enhancement efforts to achieve the "no net loss of wetland function" standard articulated in this Mitigation Measure 4.4-1 as demonstrated through appropriate functional assessment methodologies such as HGM.</i></p> <p><i>Any proposal for wetland restoration or creation (pursuant to Mitigation Measure 4.4-1(c) above), including the final configuration of proposed wetlands (size, shape, depth, etc.), will be based upon the completion of soils, hydrologic and other studies confirming the feasibility of the restoration or creation proposal and shall include USACE-approved measures intended to facilitate occupancy by special status and other wetland-dependent species (e.g., plantings, collection of topsoil and inoculation of target area). Created or restored wetlands will be located in areas that have been preserved under the Resource Mitigation Program, and will be evaluated for a period of at least 5 years to ensure conformance with success criteria (e.g., target habitat characteristics, success of plantings, etc.) to be developed in conjunction with USACE and other agencies. (Applicability-program level)</i></p>	
4.4-2	Development under the LRDP would result in substantial adverse affects on special status species dependent on vernal pool and clay playa habitat due to the loss of 64 acres of this habitat type. This is considered to be a <i>potentially significant</i> impact.	PS	4.4-2. <i>Conservation easements secured under the RMP will assure the preservation of two special-status plant populations for each single population of the same species affected. In addition, preserved plant populations would be selected based on the following criteria:</i>	LS

LS: Less than significant; NI: No impact; PS: Potentially significant; S: Significant; SU: Significant and Unavoidable

	Impact	Level of Significance Prior to Mitigation ¹	Mitigation Measures	Level of Significance Following Mitigation ¹
4.4-2 cont'd			<ul style="list-style-type: none"> • Proximity to the UC Merced Campus site – known populations of an affected plant species within a 10-mile radius, including the VST lands, would be preserved by acquisition of fee title or a conservation easement on a “willing seller” basis pursuant to the RMP. Populations greater than 10 miles from the Main Campus site would be preserved only if populations within 10 miles are not available. • Population size (e.g., number of individuals per population) – preserved populations will be approximately the same size (number of individuals) as the affected populations (e.g., if an affected population consists of 100 plants the University will preserve a minimum of two populations with each population comprising a minimum of 100 plants). • Land acquired to preserve special-status plants will be preserved in perpetuity and will include sufficient buffers to protect the plants from reasonable perturbations. Whenever possible, the limits of preserved lands will be based on defensible barriers such as watershed boundaries, roads, canals, or fencelines. • As described in Mitigation Measure 4.4-1, the University will ensure availability of funding for development and management of the preserved plant populations. The RMP includes preparation of the Campus Land Reserve and Campus Natural Reserve Management Plan will specify monitoring 	

LS: Less than significant; NI: No impact; PS: Potentially significant; S: Significant; SU: Significant and Unavoidable

Impact		Level of Significance Prior to Mitigation ¹	Mitigation Measures	Level of Significance Following Mitigation ¹
4.4-2 cont'd			<i>requirements, adaptive management strategies, grazing strategies, fencing, and invasive species control on the Campus Land Reserve and Campus Natural Reserve. The University, NRS, VST or other third party also will implement management and monitoring activities on the remaining VST lands under conservation easements (Applicability-program level).</i>	
4.4-3	Development under the LRDP would result in the loss of approximately 14 acres of seasonal freshwater marsh habitat used by special status species, including California tiger salamander (CTS). In addition, the loss of grassland habitat adjacent to seasonal freshwater marsh areas could potentially impact upland refugia/habitat for CTS. With implementation of mitigation measures identified elsewhere, this is considered to be a <i>less-than-significant</i> impact.	PS	<p>4.4-3(a) <i>To minimize the potential for loss of individual CTS during project construction, the following measures will be required for construction of specific projects occurring within 0.25 miles of breeding ponds located within the Campus Land Reserve and Campus Natural Reserve:</i></p> <ul style="list-style-type: none"> • <i>Pre-construction surveys for CTS will be conducted by an independent, qualified biologist at the beginning of the rainy season prior to construction of any specific development project within the Main Campus that would affect potential CTS habitat. Surveys will be conducted in accordance with CDFG standard procedures for pre-construction surveys. If CTS are found in the construction areas, the University will consult with CDFG and USFWS to determine if salvage of salamanders is warranted, and if so, what method should be used. The construction area will be calculated and identified on construction drawings, and the area of impact will be monitored by the contractor during construction.</i> • <i>Construction vehicles will be limited to a speed of 10 miles per hour in the vicinity of identified breeding</i> 	LS

LS: Less than significant; NI: No impact; PS: Potentially significant; S: Significant; SU: Significant and Unavoidable

Impact	Level of Significance Prior to Mitigation ¹	Mitigation Measures	Level of Significance Following Mitigation ¹
4.4-3 cont'd		<p><i>ponds. This speed limit will be stipulated in all construction contracts, included in environmental, health, and safety training for construction personnel, and enforced through regular monitoring of construction sites subject to this restriction. Any fuel on these sites will be double contained and excess asphalt will be removed from the site upon completion of construction.</i></p> <ul style="list-style-type: none"> • <i>Construction activities within 0.25 mile of breeding ponds: drift fences (e.g., silt fences or other effective salamander barriers) will be erected around the construction area at the beginning of the CTS breeding season (before November 15) prior to the start of construction to exclude breeding CTS from the construction site. Fencing will be maintained for the duration of construction.</i> • <i>Construction activities that are more than 0.25 mile from breeding ponds: drift fences (e.g., silt fences or other effective salamander barriers) will be erected around the construction area at the beginning of the CTS breeding season (before November 15) prior to the start of construction to exclude breeding CTS from the construction site. Fencing will be maintained for the duration of construction.</i> • <i>If approved by the USFWS and CDFG, drift fences would be installed to redirect CTS toward preserved habitat areas within the Campus Natural Reserve and surrounding VST property that do not already support existing healthy CTS populations under</i> 	

LS: Less than significant; NI: No impact; PS: Potentially significant; S: Significant; SU: Significant and Unavoidable

Impact		Level of Significance Prior to Mitigation ¹	Mitigation Measures	Level of Significance Following Mitigation ¹
4.4-3 cont'd			<p><i>existing conditions or where habitat has been created pursuant to the RMP (see Mitigation Measure 4.4-1) may be specifically designed to provide proper conditions for CTS (Applicability-project level).</i></p> <p>4.4-3(b) <i>Although construction of the Main Campus would result in minimal impacts to breeding pond habitat, the following additional measures would be implemented:</i></p> <ul style="list-style-type: none"> • <i>Existing stock ponds on the Campus Natural Reserve and VST property would be enhanced to provide breeding habitat for CTS by eliminating nonnative fish and amphibian populations and modifying pond size (where needed) to improve hydrologic characteristics favorable to CTS.</i> • <i>Pond hydrology would be modified to discourage the establishment of predators such as bullfrogs and fish.</i> • <i>Ponds will be monitored annually to document breeding CTS and identify the presence of nonnative fish or amphibians. Nonnative species will be removed if they are observed (Applicability-program level).</i> <p>4.4-3(c) <i>The University shall improve upland habitat for CTS by managing ground squirrel activity on the Campus Natural Reserve and the remaining VST lands under conservation easement. (Applicability-program level)</i></p>	
4.4-4	Development under the LRDP would result in the loss of approximately 684 acres of grazed annual grassland habitat used by special status species. With the implementation of mitigation measures identified	PS	4.4-4(a) <i>Grassland Management Strategies. The University shall develop site specific management plans for the Campus Natural Reserve and other properties secured under conservation easements and preserved,</i>	LS

LS: Less than significant; NI: No impact; PS: Potentially significant; S: Significant; SU: Significant and Unavoidable

Impact		Level of Significance Prior to Mitigation ¹	Mitigation Measures	Level of Significance Following Mitigation ¹
4.4-4 cont'd	elsewhere, this is considered to be a <i>less-than-significant</i> impact.		<p><i>enhanced, or restored as mitigation for the LRDP. These management plans shall include strategies to promote the following goals:</i></p> <ul style="list-style-type: none"> • <i>manage grazing to enhance special status species populations</i> • <i>manage the use of rodenticides and herbicides to enhance upland habitats for special status species</i> • <i>develop supplemental watering areas outside of natural wetlands (e.g. watering troughs for cattle)</i> <p><i>The Campus Land Reserve and Campus Natural Reserve Management Plan and management measures pursuant to the conservation easement on the remaining VST lands will be implemented. Site-specific grassland management plans will include grazing management strategies designed to enhance federally listed species populations and habitat. Grazing management strategies will include:</i></p> <ul style="list-style-type: none"> • <i>Appropriate grazing regimes to optimize habitat conditions for federally listed species</i> • <i>Grazing regimes to reduce livestock impact on habitat</i> • <i>Measures to prevent fuel build-up</i> <p><i>The Campus Land Reserve and Campus Natural Reserve Management Plan and VST conservation easements will include measures to control invasive plants and animals. In addition to the grazing management strategies, additional measures to control</i></p>	

LS: Less than significant; NI: No impact; PS: Potentially significant; S: Significant; SU: Significant and Unavoidable

Impact		Level of Significance Prior to Mitigation ¹	Mitigation Measures	Level of Significance Following Mitigation ¹
			<p><i>invasive plants and animals would be implemented, including monitoring of nonnative plant populations in the monitoring area in accordance with Mitigation Measure 4.4-7, leash laws, signage programs, and other measures required by Mitigation Measure 4.4-7 (Applicability – program level)</i></p> <p>4.4-4(b) <i>Pesticide Management. The University shall implement a pesticide management plan regulating the use of pesticides (including rodenticides) for the Campus Land Reserve, Campus Natural Reserve and other properties preserved, enhanced, or restored as mitigation for the LRDP. This plan shall integrate agricultural practices, including grazing and pesticide use, with management and protection of vernal pool, clay playa, and grassland habitats and special status species dependent upon these habitats. (Applicability - program level)</i></p>	
4.4-5	Development under the LRDP would result in the direct loss of nesting habitat for resident and migratory avian species of special concern and raptors known to breed in the project vicinity. This is considered to be a <i>potentially significant</i> impact.	PS	<p>4.4-5(a) <i>Prior to the implementation of the LRDP, a site reconnaissance survey will be conducted of the Main Campus to provide baseline data for nesting raptor and avian species of concern. (Applicability—program level)</i></p> <p>4.4-5(b) <i>Prior to the onset of construction activities, surveys for special status avian species and raptors would be conducted on the affected portion of the Campus site following USFWS and/or CDFG guidelines. If no active avian nests are identified on or within 250 feet of the construction site, no further mitigation would be necessary. (Applicability—project level)</i></p>	LS

LS: Less than significant; NI: No impact; PS: Potentially significant; S: Significant; SU: Significant and Unavoidable

Impact		Level of Significance Prior to Mitigation ¹	Mitigation Measures	Level of Significance Following Mitigation ¹
4.4-5 cont'd			<p>4.4-5(c) <i>If active nests for avian species of concern or raptor nests are found on the Campus site within the construction footprint or a 250-foot buffer zone, construction would be delayed within the buffer zone until the young have fledged, or appropriate mitigation measures responding to the specific situation will be developed in consultation with CDFG. (Applicability-project level)</i></p> <p>4.4-5(d) <i>In the case of burrowing owls, burrows would be avoided or passive exclusion and relocation techniques following CDFG guidance would be implemented.</i></p> <p><i>Due to the presence of suitable nesting habitat in the vicinity of the Campus site, the University of California shall also implement Mitigation Measure 4.4-5(e) (below) to avoid disturbance to nesting Swainson's hawks in accordance with CDFG mitigation guidelines (Applicability-project level).</i></p> <p>4.4-5(e) <i>The Campus shall conduct a preconstruction breeding season survey of the proposed project site, and within a 1,000-foot radius of the site, to determine the presence or absence of any nesting Swainson's hawks.</i></p> <p><i>If any Swainson's hawks are found nesting within a 1,000-foot radius of the project site, the Campus shall, in consultation with the CDFG, determine the appropriate actions necessary to protect the nest site and prevent disturbance until the young birds have fledged and are foraging independently. Measures may include monitoring the nest site during construction or</i></p>	

LS: Less than significant; NI: No impact; PS: Potentially significant; S: Significant; SU: Significant and Unavoidable

Impact		Level of Significance Prior to Mitigation ¹	Mitigation Measures	Level of Significance Following Mitigation ¹
4.4-5 cont'd			<i>avoiding construction within ¼ mile during the nesting season. (Applicability-project level)</i>	
4.4-6	Development under the LRDP would result in the loss of approximately 762 acres of habitat that may be used for movement of special status mammal species. This is considered to be a <i>less-than-significant</i> impact.	LS	<p>4.4-6(a) <i>Pre-construction surveys should be conducted in accordance with the kit fox protocol contained in the USFWS Standardized Recommendations for Protection of the San Joaquin Kit Fox Prior to or During Ground Disturbance. These surveys should be conducted prior to any development within the Main Campus Area to eliminate or minimize any possibility of a direct take of this species. Pre-construction surveys for kit fox dens shall be conducted no more than 30 days prior to any construction-related activities:</i></p> <ul style="list-style-type: none"> • <i>These surveys shall be conducted by a qualified biologist whose primary objective would be to identify kit fox habitat features on the Campus site and evaluate site use by kit fox.</i> • <i>If an active kit fox den is detected within (or immediately adjacent to) the area of work, standard den clearance shall be conducted in accordance with the USFWS kit fox ground disturbance protocol.</i> • <i>If no kit fox activity is detected, then a written report shall be submitted to the USFWS within five working days after completion of the surveys. (Applicability—project level)</i> <p>4.4-6(b) <i>All construction-related activities shall be preceded by a tail-gate session, the primary purpose of which will be to describe the importance of implementing construction-related activities that will minimize</i></p>	LS

LS: Less than significant; NI: No impact; PS: Potentially significant; S: Significant; SU: Significant and Unavoidable

	Impact	Level of Significance Prior to Mitigation ¹	Mitigation Measures	Level of Significance Following Mitigation ¹
4.4-6 cont'd			<p><i>potential construction-related impacts to kit foxes, including:</i></p> <ul style="list-style-type: none"> • <i>All food-related items shall be properly disposed of, and signs indicating that the feeding of wildlife is prohibited shall be placed at the construction site.</i> • <i>Vehicle traffic shall occur primarily between dawn and dusk, and shall be limited to 20 mph to reduce the potential of road mortality of kit fox.</i> • <i>Any trench or pit shall be constructed in such a way as to provide ramps of either fill or planks to prevent kit foxes (or other species) from becoming entrapped in such a trench or pit.</i> • <i>Pipes, culverts, etc. greater than four inches in diameter shall be stored in such a way as to prohibit foxes or other species from using these areas as temporary refuge. In addition, these structures shall be thoroughly inspected each morning for kit fox or other species.</i> • <i>No firearms shall be allowed on the Campus site. No pets shall be permitted on construction sites. The use of rodenticides and herbicides on the Campus site shall be restricted. (Applicability—project level)</i> <p>4.4-6(c) <i>The University will construct artificial dens for kit fox on the Campus Natural Reserve and lands under conservation easements at distances of approximately 0.5 miles from the edge of the Main Campus (Applicability-program level).</i></p>	

LS: Less than significant; NI: No impact; PS: Potentially significant; S: Significant; SU: Significant and Unavoidable

Impact		Level of Significance Prior to Mitigation ¹	Mitigation Measures	Level of Significance Following Mitigation ¹
4.4-6 cont'd				
4.4-7	Development under the LRDP could result in indirect impacts to wetlands and uplands adjacent to the 910-acre Main Campus site. This is considered to be a <i>potentially significant</i> impact.	PS	<p>4.4-7(a) <i>Potential adverse indirect impacts to areas outside of the Campus site would be mitigated by monitoring the adjacent Campus Land Reserve and the Campus Natural Reserve. These areas would be periodically monitored and maintained by Campus maintenance crews to verify that the monitoring area is meeting the following performance criteria:</i></p> <ul style="list-style-type: none"> • <i>Prevents the flow of surface runoff from the Campus site to wetlands in the monitoring area</i> • <i>No increase in nonnative species abundance or distribution within the monitoring area</i> • <i>No substantial degradation of wetland biota or water quality in the monitoring area relative to reference wetlands in the Campus Land Reserve or Campus Natural Reserve is observed</i> • <i>The University shall develop a monitoring and management plan for this monitoring area that will be coordinated with the Resource Mitigation Program outlined in Mitigation Measures 4.4-1(a-d). (Applicability—program level)</i> <p>4.4-7(b) <i>Signs will be posted along the northern and eastern perimeter of all Main Campus development informing the public of the sensitivity of habitats in the Campus Land Reserve and Campus Natural Reserve areas and prohibiting unauthorized entry into the monitoring</i></p>	LS

LS: Less than significant; NI: No impact; PS: Potentially significant; S: Significant; SU: Significant and Unavoidable

Impact		Level of Significance Prior to Mitigation ¹	Mitigation Measures	Level of Significance Following Mitigation ¹
4.4-7 cont'd			<p>areas. (Applicability—program level)</p> <p>4.4-7(c) A public education/orientation program will be implemented at the campus to inform new students, staff and faculty of the sensitive resources outside of the perimeter of the Main Campus and the need to protect those resources (Applicability—program level).</p> <p>Altered Hydrology and Water Quality Degradation</p> <p>4.4-7(d) To reduce the potential for indirect impacts related to altered hydrologic regime in areas outside of the Main Campus, as well as the potential for sediment and nutrient loading of adjacent areas, storm water drainage on the Main Campus will be designed to drain toward the core of the Campus site and directed to appropriate storm water management facilities. No storm water runoff will be discharged into adjacent Campus Land Reserve or Campus Natural Reserve lands, except as may be approved as a component of an aquatic habitat enhancement program under Mitigation Measure 4.4-1. (Applicability—program level)</p> <p>Control of Nonnative and Invasive Species</p> <p>4.4-7(e) The University of California shall implement a program to monitor and control nonnative species on the Campus site. This program will include measures to control the establishment and dispersal of nonnative species during grading, construction, and operation of the proposed Main Campus. All species included on the State of California's and the U.S. Department of</p>	
4.4-7				

LS: Less than significant; NI: No impact; PS: Potentially significant; S: Significant; SU: Significant and Unavoidable

	Impact	Level of Significance Prior to Mitigation ¹	Mitigation Measures	Level of Significance Following Mitigation ¹
cont'd			<p><i>Agriculture's list of regulated noxious weeds shall be monitored and adequately controlled to limit dispersal and establishment of these species on undeveloped lands on the Campus site. The University shall monitor populations of native wildlife species to assess potential impacts of urban wildlife species and other indirect effects. The University shall implement control strategies if native wildlife populations are adversely and significantly affected compared to reference populations outside the Campus site. (Applicability—program level)</i></p> <p>4.4-7(f) <i>To ensure that seeds from invasive species are not transported into the Campus site by construction equipment, all equipment will be washed down prior to being transported to the Campus site. All construction equipment will be clean and generally free of seeds or other plant material before being brought on site.</i></p> <p><i>The contractor will notify the Campus project manager of the source location of all off-site fill material a minimum of ten days prior to importing material to the project site and appropriate steps will be taken to minimize the potential for invasive species to colonize areas disturbed during construction due to use of such fill.</i></p> <p><i>To the extent feasible, any organic material used during project construction for erosion control, or any material used for hydroseeding or revegetating disturbed areas should be free of invasive species. (Applicability—project level)</i></p>	

LS: Less than significant; NI: No impact; PS: Potentially significant; S: Significant; SU: Significant and Unavoidable

Impact		Level of Significance Prior to Mitigation ¹	Mitigation Measures	Level of Significance Following Mitigation ¹
4.4-7 cont'd			<p><i>Air-Related Transport</i></p> <p>4.4-7(g) <i>To reduce the potential for air-related transport of pollutants such as herbicides or pesticides, herbicide and pesticide use for campus maintenance activities will be restricted to organic and/or biodegradable products wherever possible. (Applicability—program level)</i></p> <p><i>Wildfires</i></p> <p>4.4-7(h) <i>To reduce the potential for increased wildfires in areas adjacent to the Campus, the Campus Land Reserve would be grazed in a manner that would reduce excessive vegetation adjacent to the Campus while providing protection for sensitive biological resources (e.g., wetlands and special status species). In addition, the vegetation within the 250-foot monitoring area at the interface of the Main Campus and Campus Land Reserve would be maintained to reduce fuel loading. Landscaping between the perimeter road and the Main Campus fence line should consist of fire-resistant plant species and shall be maintained to provide a firebreak between the Main Campus and the adjacent Campus Land Reserve. (Applicability—program/project level)</i></p> <p><i>Outdoor Lighting</i></p> <p>4.4-7(i) <i>To reduce light spill effects, the following measures will be implemented.</i></p> <ul style="list-style-type: none"> • <i>All outdoor lighting on the Main Campus site will be directed downward to minimize potential spill-over of night-time lighting into adjacent</i> 	

LS: Less than significant; NI: No impact; PS: Potentially significant; S: Significant; SU: Significant and Unavoidable

Impact		Level of Significance Prior to Mitigation ¹	Mitigation Measures	Level of Significance Following Mitigation ¹
4.4-7 cont'd			<p><i>undeveloped lands.</i></p> <ul style="list-style-type: none"> • <i>Where appropriate, outdoor light sources within 1,000 feet of the Main Campus-Campus Land Reserve boundary would be limited to low-pressure sodium lighting with luminous outputs of 1,800 lumens or less.</i> • <i>Where appropriate, outdoor light sources greater than 4,050 lumens will be fitted with the best commercially available shielding.</i> • <i>Where appropriate, outdoor light sources less than 4,050 lumens will be partially shielded (i.e., shielded or constructed so that no more than 10 percent of the light rays emitted by the fixture, either directly from the lamp or indirectly from the fixture, project above the horizontal plane running through the lowest point on the fixture) to prevent light from being directed upward.</i> • <i>All outdoor light sources greater than 4,050 lumens will be turned off between 11:00 p.m. and 6:00 a.m., except where this is precluded by public safety considerations (Applicability-program level).</i> <p><i>Predation by Pet Species</i></p> <p>4.4-7(j) <i>The University will install a woven hog wire fence (i.e., 2" mesh) on a 24-30" lower panel to reduce entry of dogs to the adjacent lands surrounding the Main Campus (Applicability-program level).</i></p>	

LS: Less than significant; NI: No impact; PS: Potentially significant; S: Significant; SU: Significant and Unavoidable

Impact		Level of Significance Prior to Mitigation ¹	Mitigation Measures	Level of Significance Following Mitigation ¹
4.4-7 cont'd			<p>4.4-7(k) <i>The University would adopt and enforce leash laws for dogs on Campus (Applicability-program level).</i></p> <p>Conservancy Fairy Shrimp</p> <p>4.4-7(l) <i>The University will strictly limit access to the Conservancy fairy shrimp pool by fencing or other means.</i></p> <ul style="list-style-type: none"> • <i>The Campus security force will patrol the Campus Land Reserve and Campus Natural Reserve lands, specifically in the vicinity of the Conservancy fairy shrimp pool, to assure human disturbance of the area is minimized.</i> • <i>The University will implement an enforcement program and will limit trespassing into the Conservancy fairy shrimp area.</i> • <i>The University will implement a training program for its security personnel and Campus maintenance crews assigned to the Campus Natural Reserve area to educate such personnel on the protection of the natural resources within the Campus Natural Reserve.</i> • <i>Educational and research uses of the Campus Land Reserve and Campus Natural Reserve will be carefully managed to prevent harm to listed species and their habitats.</i> • <i>Appropriate restrictions will be incorporated into future grazing leases to prohibit incompatible uses</i> 	

LS: Less than significant; NI: No impact; PS: Potentially significant; S: Significant; SU: Significant and Unavoidable

Impact		Level of Significance Prior to Mitigation ¹	Mitigation Measures	Level of Significance Following Mitigation ¹
			<i>(Applicable-program level).</i>	
4.4-8	Development under the LRDP will not conflict with local applicable policies protecting biological resources or provisions of an adopted habitat conservation plan. This is considered to be a <i>less-than-significant</i> impact.	LS	<i>No mitigation required.</i>	LS
4.4-9	Off-site improvements related to the construction of utilities infrastructure (e.g., gas/electric transmission lines) could potentially affect sensitive biological resources. This is considered to be a <i>less-than-significant</i> impact.	LS	<i>No additional mitigation required.</i>	LS
4.4-10	Construction resulting from implementation of the LRDP could result in temporary construction impacts to sensitive biological resources, including wetlands or special status plants and wildlife, adjacent to the project site. This is considered to be a <i>potentially significant</i> impact.	PS	<p><i>4.4-10(a) Prior to the onset of construction, temporary construction fencing would be installed along the boundaries of the project area to prevent construction vehicles from straying beyond the project site. Construction best management practices such as dust-control measures, sedimentation devices, and restricted refueling/maintenance practices would be implemented. A spill-response plan would be prepared for the site to ensure prompt capture of any accidental releases. (Applicability—project level)</i></p> <p><i>4.4-10(b) Prior to the onset of construction activities, a training session for all construction personnel would be conducted to educate construction personnel of the sensitive nature of the areas adjacent to the Phase 1 Campus. At a minimum, the training shall include a description of the species at risk and their habitat, the importance of the species and their habitat, the general</i></p>	LS

LS: Less than significant; NI: No impact; PS: Potentially significant; S: Significant; SU: Significant and Unavoidable

Impact		Level of Significance Prior to Mitigation ¹	Mitigation Measures	Level of Significance Following Mitigation ¹
4.4-10 cont'd			<i>measures that are being implemented to conserve sensitive areas/species as they relate to the project, and the boundaries within which the project may be accomplished. Brochures, books, and briefings may be used in the training session, provided that a qualified person is on hand to answer any questions. (Applicability—project level)</i>	
4.4-11	Development under the LRDP, in conjunction with other cumulative development would result in the loss or adverse modification of important native plant and wildlife habitat, including wetlands, vernal pool habitat, clay playa habitat, and annual grassland habitat, and adverse effects to listed and non-listed special-status species associated with these habitats.	S	<i>See mitigation measures 4.4-1 (a-d), 4.4-3, 4.4-4 (a and b), 4.4-5 (a-e), 4.4-6 (a and b), 4.4-7 (a-h), and 4.4-10 (a and b).</i>	LS (with respect to listed special-status species) SU (with respect to non-listed special status species)
4.5 Cultural Resources				
4.5-1	Development of the Main Campus under the LRDP has the potential to disturb or destroy archaeological resources. This is considered a <i>potentially significant</i> impact.	PS	4.5-1(a) <i>Prior to any construction on the Campus, the Campus will work with a qualified archaeologist to develop and conduct an appropriate construction monitoring plan and inadvertent discovery plan to ensure that any resource uncovered during construction is identified and appropriately treated. (Applicability—program level)</i> 4.5-1(b) <i>If a potentially significant archaeological resource is identified during preliminary phases of campus construction, the campus will incorporate into the proposed project design measures that will minimize or</i>	LS

LS: Less than significant; NI: No impact; PS: Potentially significant; S: Significant; SU: Significant and Unavoidable

Impact		Level of Significance Prior to Mitigation ¹	Mitigation Measures	Level of Significance Following Mitigation ¹
4.5-1 cont'd			<p><i>eliminate direct impacts to the deposit. These could include avoidance of the site by inclusion in landscaping or open space, placement of fill over the site, and/or project redesign. If this is not feasible, or if such measures will not ensure the avoidance of impacts, the University will ensure that an archaeological testing program is developed and carried out to assess the significance of the resource. (Applicability—project level)</i></p> <p>4.5-1(c) <i>If a resource is determined to be significant, and if it cannot be preserved intact through project design measures, then the University will retain an archaeologist to design and carry out a treatment plan to document the data and/or preserve such scientific samples of the data for which the site is significant as may be appropriate, given the significance of the find. (Applicability—project level)</i></p> <p>4.5-1(d) <i>All projects on campus shall be conditioned with an inadvertent-discovery clause. Under this clause, construction crews and maintenance teams working on campus shall be informed by the University of pertinent cultural resources regulations and of the potential for buried resources. If an archaeological resource is uncovered during construction, work in the vicinity will halt until the potential resources has been evaluated by a qualified archaeologist and, if significant, has been treated appropriately. (Applicability—project level)</i></p> <p>4.5-1(e) <i>With respect to the refuse dump (described above), which may contain material of historic interest, if construction activity is planned in this area, or if the</i></p>	

LS: Less than significant; NI: No impact; PS: Potentially significant; S: Significant; SU: Significant and Unavoidable

Impact		Level of Significance Prior to Mitigation ¹	Mitigation Measures	Level of Significance Following Mitigation ¹
4.5-1 cont'd			<i>University elects to clear away the dump material as part of site preparation, the University will ensure that a qualified archaeologist is present during clearing of surface materials. If materials 50 years or older are revealed, the archaeologist will record the material and make a recommendation regarding the data potential of the find. If the material appears likely to contribute information regarding the lives of early 20th century ranch residents in the area, the archaeologist will, in consultation with the Campus, design and carry out a data recovery program to the extent one may be appropriate. (Applicability—project level)</i>	
4.5-2	Development of the Main Campus under the LRDP has the potential to result in disturbance or destruction of Native American human remains. This is considered a <i>potentially significant</i> impact.	PS	<p>4.5-2(a) <i>Implement Mitigation Measures 4.5-1(a) through (d) to minimize the potential for disturbance or destruction of human remains in an archaeological context. (Applicability—program level)</i></p> <p>4.5-2(b) <i>A representative of the local Native American community will be offered the opportunity to monitor any excavation, including archaeological excavation, within the boundaries of any identified Native American archaeological site. (Applicability—project level)</i></p> <p>4.5-2(c) <i>In the event of the discovery on campus of a burial, human bone, or suspected human bone, all excavation or grading in the vicinity of the find will halt immediately and the area of the find will be protected. If a qualified archaeologist is present, he/she will determine whether the bone is human. If the archaeologist determines that the bone is human, or in the absence of an archaeologist, the University</i></p>	LS

LS: Less than significant; NI: No impact; PS: Potentially significant; S: Significant; SU: Significant and Unavoidable

Impact		Level of Significance Prior to Mitigation ¹	Mitigation Measures	Level of Significance Following Mitigation ¹
			<i>immediately will notify the Merced County Coroner of the find and comply with the provisions of P.R.C. § 5097 with respect to Native American involvement, burial treatment, and reinterment (Applicability—project level)</i>	
4.5-3	Development under the LRDP has the potential to result in disturbance or destruction of potential cultural resources through incidental activity and increased accessibility, which could result in vandalism or illicit collection. This is considered a <i>less-than-significant</i> impact.	LS	4.5-3 <i>The University shall ensure that all campus planning and maintenance personnel are informed of the potential for cultural resources impacts, and University requirements for their protection. This shall include provision of written materials to familiarize personnel with the range of resources that might be expected, the kinds of activities that may result in impacts, and the legal framework of cultural resources protection. (Applicability—program level)</i>	LS
4.5-4	Development of the Main Campus under the LRDP has the potential to disturb or destroy paleontological resources. This is considered a <i>potentially significant</i> impact.	PS	4.5-4(a) <i>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 requirement that unauthorized collection of fossil resources is prohibited. (Applicability—project level)</i> 4.5-4(b) <i>A qualified paleontologist will be intermittently present to inspect exposures of the Merhten Formation, North Merced Gravels, and Riverbank Formation during</i>	LS

LS: Less than significant; NI: No impact; PS: Potentially significant; S: Significant; SU: Significant and Unavoidable

Impact		Level of Significance Prior to Mitigation ¹	Mitigation Measures	Level of Significance Following Mitigation ¹
			<i>construction operations to ensure that paleontological resources are not destroyed by project construction. (Applicability—project level)</i>	
4.5-5	Cumulative development could damage or destroy unidentified prehistoric, historic, or paleontological resources. This is a <i>less-than-significant</i> cumulative impact.	LS	<i>No mitigation required.</i>	LS
4.6 Geology, Soils and Seismicity				
4.6-1	Implementation of the LRDP could expose people or structures to potential adverse effects involving seismic ground shaking. This is considered a <i>less-than-significant</i> impact.	LS	<i>No mitigation required.</i>	LS
4.6-2	Implementation of the LRDP could result in soil erosion or the loss of topsoil. This is considered a <i>less-than-significant</i> impact.	LS	<i>No mitigation required.</i>	LS
4.6-3	Implementation of the LRDP could result in construction of facilities on expansive soil, creating potential risks to life or property. This is considered to be a <i>potentially significant</i> impact.	PS	<i>4.6-3 (a) Prior to project-specific building design, a site-specific geotechnical study 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 inspection of the levees of the Fairfield Canal and Le Grand Canal for any construction site near or spanning over the canals. The study shall include an evaluation of liquefaction potential, slope stability, landslide potential, expansive and compressible soils, and other structural characteristics. Specific geotechnical recommendations designed to mitigate for seismic hazards shall be identified. In addition, recommendations for adequate</i>	LS

LS: Less than significant; NI: No impact; PS: Potentially significant; S: Significant; SU: Significant and Unavoidable

Impact		Level of Significance Prior to Mitigation ¹	Mitigation Measures	Level of Significance Following Mitigation ¹
4.6-3 cont'd			<p><i>building design, including excavation and fill requirements for any identified soil constraints, shall be included in the analysis. These recommendations shall be included and implemented in project design (Applicability—project level)</i></p> <p>4.6-3(b) <i>The UC Merced’s Policy and Procedures Manual will include a “Pest Management” section on management practices to control rodent activities on the Main Campus. The Campus and MID will cooperatively monitor levees for rodent burrows (Applicability—program level).</i></p>	
4.6-4	Cumulative development could expose people or structures to potential adverse effects involving seismic ground shaking. This is considered a <i>less-than-significant</i> impact.	LS	<i>No mitigation required.</i>	LS
4.6-5	Cumulative development could result in soil erosion or the loss of topsoil. This is a <i>less-than-significant</i> cumulative impact.	LS	<i>No mitigation required.</i>	LS
4.6-6	Cumulative development could result in result in construction of facilities on expansive soil, creating risks to life or property. This is considered to be a <i>less-than-significant</i> cumulative impact.	LS	<i>No mitigation required.</i>	LS
4.7 Hazards and Hazardous Materials				
4.7-1	Use of hazardous chemicals and the generation of hazardous chemical waste at UC Merced would not significantly expose campus occupants and nearby public to potential health or safety risks. This is considered to be a <i>less-than-significant</i> impact.	LS	<i>No mitigation required.</i>	LS

LS: Less than significant; NI: No impact; PS: Potentially significant; S: Significant; SU: Significant and Unavoidable

Impact		Level of Significance Prior to Mitigation ¹	Mitigation Measures	Level of Significance Following Mitigation ¹
4.7-2	Use of radioactive material and the generation of radioactive waste at UC Merced would not significantly expose campus occupants to potential health or safety risks. This is considered to be a <i>less-than-significant</i> impact.	LS	<i>No mitigation required.</i>	LS
4.7-3	Use of biohazardous materials and the generation of biohazardous wastes at UC Merced would not significantly expose campus occupants to potential health or safety risks. This is considered to be a <i>less-than-significant</i> impact.	LS	<i>No mitigation required.</i>	LS
4.7-4	Use of laboratory animals at UC Merced would not significantly increase the risk of animal bites, escapes, and disease transmission. This is considered to be a <i>less-than-significant</i> impact.	LS	<i>No mitigation required.</i>	LS
4.7-5	Hazardous materials transported to and from the campus would not significantly expose people to potential health risks in the event of an accidental release. This is considered to be a <i>less-than-significant</i> impact.	LS	<i>No mitigation required.</i>	LS
4.7-6	The campus would be located within 2 miles of a private airstrip but would not create a significant safety hazard for people residing or working on campus. This is considered to be a <i>less-than-significant</i> impact.	LS	<i>No mitigation required.</i>	LS
4.7-7	Campus operations using hazardous materials would not be anticipated to exceed emergency response capabilities of the local providers. This is considered to be a <i>less-than-significant</i> impact.	LS	<i>No mitigation required.</i>	LS

LS: Less than significant; NI: No impact; PS: Potentially significant; S: Significant; SU: Significant and Unavoidable

Impact		Level of Significance Prior to Mitigation ¹	Mitigation Measures	Level of Significance Following Mitigation ¹
4.7-8	Construction activities would not create a significant exposure of Campus occupants and construction workers to contaminated soil or groundwater. This is considered to be a <i>less-than-significant</i> impact.	LS	<i>No mitigation required.</i>	LS
4.7-9	Construction of the Campus adjacent to the canals would not expose the Campus population to physical safety hazards. This impact is considered <i>less than significant</i> .	LS	<i>No mitigation required.</i>	LS
4.7-10	The construction of the proposed campus could expose people or structures to a significant risk of loss, injury, or death involving wildland fires. This is considered to be a <i>less-than-significant</i> impact.	LS	<i>No mitigation required</i>	LS
4.7-11	The Campus, the University Community, and other regional development would involve the use, storage, transport, and disposal of hazardous materials and wastes. The cumulative impact from these activities would be <i>less than significant</i> .	LS	<i>No mitigation required.</i>	LS
4.8 Hydrology and Water Quality				
4.8-1	Implementation of the LRDP could affect the quality of surface runoff water but would not result in a violation of water quality standards. This is considered a <i>less-than-significant</i> impact.	LS	<i>No mitigation required.</i>	LS
4.8-2	Implementation of the LRDP would not substantially affect groundwater supplies. This is considered a <i>less-than-significant</i> impact.	LS	<i>No mitigation required.</i>	LS
4.8-3	Implementation of the LRDP would increase impervious surfaces at the site, but would not substantially affect groundwater recharge. This is	LS	<i>No mitigation required.</i>	LS

LS: Less than significant; NI: No impact; PS: Potentially significant; S: Significant; SU: Significant and Unavoidable

	Impact	Level of Significance Prior to Mitigation¹	Mitigation Measures	Level of Significance Following Mitigation¹
	considered a <i>less-than-significant</i> impact.			
4.8-4	Implementation of the LRDP would require installation of groundwater wells on the campus site, which would not result in impacts on adjacent well yields or subsidence. This is considered a <i>less-than-significant</i> impact.	LS	<i>No mitigation required.</i>	LS
4.8-5	Implementation of the LRDP would alter site drainage patterns resulting in minimal erosion or siltation on or off-site. This is considered a <i>less-than-significant</i> impact.	LS	<i>No mitigation required.</i>	LS
4.8-6	Implementation of the LRDP would alter site drainage patterns but would not result in significant flooding on and off-site. This is considered a <i>less-than-significant</i> impact.	LS	4.8-6 <i>The University will install high water level shutoff sensors at Campus storm drainage pumping stations to regulate discharges into Fairfield Canal as necessary (Applicability-program level).</i>	LS
4.8-7	Implementation of the LRDP would create runoff from the site that would not exceed the capacity of storm drainage systems. This is considered a <i>less-than-significant</i> impact.	LS	<i>No mitigation required.</i>	LS
4.8-8	Implementation of the LRDP would not adversely affect water quality from the discharge of wastewater or use of reclaimed water. This is considered a <i>less-than-significant</i> impact.	LS	<i>No mitigation required.</i>	LS
4.8-9	Implementation of the LRDP will increase silt and sedimentation during construction but will not adversely affect water quality. This is considered a <i>less-than-significant</i> impact.	LS	<i>No mitigation required</i>	LS
4.8-10	Increased impervious surfaces associated with	LS	<i>See Mitigation Measure 4.8-6.</i>	LS

LS: Less than significant; NI: No impact; PS: Potentially significant; S: Significant; SU: Significant and Unavoidable

Impact		Level of Significance Prior to Mitigation ¹	Mitigation Measures	Level of Significance Following Mitigation ¹
	development within the drainage basin could cumulatively increase surface runoff, but would not substantially increase local and regional flooding. This cumulative impact is considered to be <i>less than significant</i> .			
4.8-11	Increased impervious surfaces associated with development of the campus and other development overlying the groundwater basin would not substantially reduce groundwater recharge potential. This cumulative impact is considered to be <i>less than significant</i> .	LS	<i>No mitigation required.</i>	LS
4.8-12	Increased demand for groundwater from the development of the campus, University Community, and other development would not substantially affect the groundwater basin. This cumulative impact is considered to be <i>less than significant</i> .	LS	<i>No mitigation required.</i>	LS
4.8-13	Increase impervious surfaces associated with the campus and other development could cumulatively increase urban contaminants in surface runoff, but would not adversely affect the quality of receiving water. This cumulative impact is considered to be <i>less than significant</i> .	LS	<i>No mitigation required.</i>	LS
4.8-14	Development of the campus and other development cumulatively would not substantially affect water quality because of the discharge of wastewater or use of reclaimed water. This cumulative impact is considered to be <i>less than significant</i> .	LS	<i>No mitigation required.</i>	LS

LS: Less than significant; NI: No impact; PS: Potentially significant; S: Significant; SU: Significant and Unavoidable

Impact		Level of Significance Prior to Mitigation ¹	Mitigation Measures	Level of Significance Following Mitigation ¹
4.9 Land Use and Planning				
4.9-1	Implementation of the LRDP would not conflict with any applicable land use plan, policy or regulation of an agency with jurisdiction over the project. This is considered to be a <i>less-than-significant</i> impact.	LS	<i>No mitigation required.</i>	LS
4.9-2	Implementation of the LRDP would not result in development of land uses that are substantially incompatible with existing adjacent land uses, or with planned uses. This is considered to be a <i>less-than-significant</i> impact.	LS	<i>No mitigation required.</i>	LS
4.9-3	The Campus, in conjunction with the University Community, would result in incompatibilities with adjacent land uses. This impact is considered <i>significant</i> .	S	<i>No mitigation available.</i>	SU
4.10 Noise				
4.10-1	Implementation of the LRDP would result in increased vehicular traffic on the regional road network, which would increase ambient noise levels. This is considered to be a <i>significant</i> impact.	S	<i>4.10-1 For new developments, the County and the City of Merced can and should take noise considerations into account during initial site planning, in order to maximize shielding by the planned structures or other on-site features. (Applicability—program level)</i>	SU
4.10-2	Daily activities and special events at the campus could expose nearby receptors, especially the users of the County Park to elevated noise levels. This is considered to be a <i>less-than-significant</i> impact.	LS	<i>4.10-2 The Campus will work with the Merced County Parks and Recreation Division to coordinate the schedule of special events on both the Campus and in the park to avoid nuisance effects (Applicability—program level).</i>	LS
4.10-3	Construction of the campus facilities could expose nearby receptors, especially users of the County Park to elevated noise levels. This is considered to be a <i>potentially significant</i> impact.	PS	<i>4.10-3 Prior to initiation of campus construction, the University shall approve a construction noise mitigation program including but not limited to the following:</i>	SU

LS: Less than significant; NI: No impact; PS: Potentially significant; S: Significant; SU: Significant and Unavoidable

Impact		Level of Significance Prior to Mitigation ¹	Mitigation Measures	Level of Significance Following Mitigation ¹
4.10-3 cont'd			<ul style="list-style-type: none"> • Construction equipment shall be properly outfitted and maintained with feasible noise reduction devices to minimize construction-generated noise. • Stationary noise sources such as generators or pumps shall be located away from noise sensitive land uses as feasible. • Prior to construction activities, the University (or the University's contractor) will coordinate with the County Parks and Recreation Division to reduce the likelihood that planned events (e.g., weddings) at the park are adversely affected by project construction. • 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. (Applicability - project level) 	
4.10-4	Construction of off-site utility connections and infrastructure improvements would not expose sensitive land uses to high noise levels. This is considered to be a <i>less-than-significant</i> impact.	LS	<i>No mitigation required</i>	LS
4.10-5	Construction activities could expose persons to excessive groundborne vibration or groundborne noise. This is considered to be a <i>potentially significant</i> impact	PS	4.10-5 <i>Limit groundborne vibration due to construction activities to 0.2 in/sec velocity (limit of potential for damage to structures) in the vertical direction at sensitive receptors. 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</i>	LS

LS: Less than significant; NI: No impact; PS: Potentially significant; S: Significant; SU: Significant and Unavoidable

Impact		Level of Significance Prior to Mitigation ¹	Mitigation Measures	Level of Significance Following Mitigation ¹
			<i>precautions are taken in those facilities to protect ongoing activities from vibration effects. (Applicability—project level)</i>	
4.10-6	Implementation of the LRDP would not expose campus residents to high noise levels from adjacent land uses. This is considered to be a <i>less-than-significant</i> impact.	LS	<i>4.10-6 Student housing or other noise-sensitive land uses should consider incorporating building design (including building layouts that shield outdoor land uses from the potentially annoying noise) and window upgrades for interior noise-sensitive uses within 1,000 feet of the boat use areas. (Applicability-project level)</i>	LS
4.10-7	Construction of the campus and the University Community would not cumulatively result in excessive noise levels at Lake Yosemite Regional Park. This impact is considered <i>less than significant</i> .	LS	<i>No mitigation required.</i>	LS
4.10-8	Implementation of the LRDP in conjunction with the University Community and the Campus Parkway projects and the regional growth would increase the traffic on the regional road network, which would increase ambient noise levels. This is considered to be a <i>significant</i> impact.	S	<i>See Mitigation Measure 4.10-1.</i>	SU
<i>4.11 Population, Employment, and Housing</i>				
4.11-1	Implementation of the LRDP would create a demand for housing but that demand would be accommodated by local jurisdictions. This is considered to be a <i>less-than-significant</i> impact.	LS	<i>No mitigation required</i>	LS
4.11-2	The proposed project, in conjunction with the University Community and other projects, could result in a demand for housing but that demand would be accommodated by local jurisdictions. This	LS	<i>No mitigation required.</i>	LS

LS: Less than significant; NI: No impact; PS: Potentially significant; S: Significant; SU: Significant and Unavoidable

Impact		Level of Significance Prior to Mitigation ¹	Mitigation Measures	Level of Significance Following Mitigation ¹
cumulative impact is considered <i>less than significant</i> .				
4.12 Public Services				
4.12-1	On-campus law enforcement services would be provided by the University and the anticipated on-campus demand for law enforcement services would be adequately met. This is considered to be a <i>less-than-significant</i> impact.	LS	4.12-1 <i>The proposed campus shall maintain a minimum ratio of 0.72 officers per 1,000 population. (Applicability-program level)</i>	LS
4.12-2	The campus would obtain fire protection services through agreement with a local agency. This is considered to be a <i>less-than-significant</i> impact.	LS	4.12-2 <i>The Campus shall implement one or more of the following measures in order to provide an adequate level of fire protection services:</i> 4.12-2(a) <i>Contract for firefighters and support staff as necessary to maintain a ratio of 3.5 firefighters per 1,000,000 square feet of building area, 24 hours per day;</i> 4.12-2(b) <i>Provide additional equipment or improve techniques as needed to meet fire protection demand; and/or</i> 4.12-2(c) <i>Establish mutual aid agreements with adjacent jurisdictions. (Applicability—program level)</i>	LS
4.12-3	Development of the campus would result in increased demand for hospital services. The existing and currently planned medical facility system in Merced County would be adequate to accommodate projected future need. This is considered to be a <i>less-than-significant</i> impact.	LS	<i>No mitigation required</i>	LS
4.12-4	The development of the campus would generate demand for elementary and secondary educational services, which could result in physical effects on the	PS	4.12-4 <i>The Merced City School District and the Merced Union High School District can and should provide adequate school facilities to all portions of the service area to</i>	SU

LS: Less than significant; NI: No impact; PS: Potentially significant; S: Significant; SU: Significant and Unavoidable

Impact		Level of Significance Prior to Mitigation ¹	Mitigation Measures	Level of Significance Following Mitigation ¹
	environment. This is considered a <i>potentially significant</i> impact.		<i>accommodate growth in the number of school-aged children.</i>	
4.12-5	Development of the campus would result in increased demand for library services. The proposed campus would itself provide extensive academic library facilities, which would serve the general public, as well as students, staff and faculty of the University. This is considered a <i>less-than-significant</i> impact.	LS	<i>No mitigation required.</i>	LS
4.12-6	Implementation of the LRDP together with cumulative development in the vicinity will result in increased need for law enforcement services. This cumulative impact is considered <i>less than significant</i> .	LS	<i>No mitigation required.</i>	LS
4.12-7	Implementation of the LRDP and cumulative development would generate an increased demand for fire protection services. This is considered a <i>less than significant</i> impact.	LS	<i>No mitigation required.</i>	LS
4.12-8	Implementation of the LRDP and cumulative development would generate an increased demand for elementary and secondary educational services, which would be met in the University Community. This is considered a <i>less-than-significant</i> impact.	LS	<i>No mitigation required.</i>	LS
4.12-9	Implementation of the LRDP and other cumulative development would result in increased demand for library services. This is considered a <i>less-than-significant</i> impact.	LS	<i>No mitigation required.</i>	LS
4.12-10	Implementation of the LRDP and other cumulative development would result in increased demand for hospital services. This is considered a <i>less-than-</i>	LS	<i>No mitigation required.</i>	LS

LS: Less than significant; NI: No impact; PS: Potentially significant; S: Significant; SU: Significant and Unavoidable

Impact		Level of Significance Prior to Mitigation ¹	Mitigation Measures	Level of Significance Following Mitigation ¹
	<i>significant</i> impact.			
4.13 Recreation				
4.13-1	Implementation of the LRDP would increase the area population and result in an increased demand for recreational facilities, which could cause a deterioration of the facilities. This impact is considered <i>potentially significant</i> .	PS	<p>4.13-1(a) Work with the County to develop a program for joint use of on-campus recreational, parking and sports facilities.</p> <p>4.13-1(b) Prior to transfer of title of any land that is currently or planned to be part of the Lake Yosemite Regional Park, work with the County to develop appropriate mechanisms for acquiring additional property to replace that potential parkland lost to conversion to non-open space campus uses.</p> <p>4.13-1(c) Work with the County to expand Lake Yosemite Regional Park in response to impacts associated with the development of the University Community, UC Merced and other growth in the north Merced region.</p> <p>4.13-1(d) Work with the County to monitor use of Lake Yosemite Regional Park. If park use increases due to development of the campus and University Community such that substantial physical deterioration of park facilities occurs, then the University will negotiate with the County to offset increased costs to the County for maintenance of park facilities (Applicability–program level).</p>	LS
4.13-2	Implementation of the LRDP would not require the construction of replacement golf course facilities. This impact is considered <i>less than significant</i> .	LS	<i>No mitigation required.</i>	LS
4.13-3	Cumulative growth in area population will result in an increased demand for recreational facilities, which	S	<i>See Mitigation Measure 4.13 (a-d).</i>	SU

LS: Less than significant; NI: No impact; PS: Potentially significant; S: Significant; SU: Significant and Unavoidable

Impact		Level of Significance Prior to Mitigation ¹	Mitigation Measures	Level of Significance Following Mitigation ¹
	could cause a deterioration of the facilities. This impact is considered <i>significant</i> .			
4.13-4	Cumulative development would not require the construction of replacement golf course facilities. This impact is considered <i>less than significant</i> .	LS	<i>No mitigation required.</i>	LS
4.14 Traffic, Circulation, and Parking				
4.14-1	Implementation of Phase 1 of the LRDP would result in exceedance of the intersection at the Lake/Bellevue intersection. This is considered a <i>significant</i> impact.	S	<i>4.14-1 Install a traffic signal at the intersection of Lake Road and Bellevue Road and widen the intersection to provide a left-turn lane on the northbound and eastbound approaches. (Applicability-project level)</i>	LS
4.14-2	Implementation of Phase 1 of the LRDP may result in operational deficiencies at the Lake/Yosemite intersection. This is considered a <i>potentially significant</i> impact.	PS	<i>4.14-2 The County can and should analyze the expected future operations of the Lake/Yosemite intersection at the following milestone points: (1) on determination of the conceptual alignment for Campus Parkway, (2) on preparation of the Geometric Approval Drawings for Campus Parkway, and (3) each October, beginning in the opening year of the UC Merced campus. If any of these analyses determine that the Lake/Yosemite intersection will operate at unacceptable LOS, the University will contribute its fair share (as described in Section 4.14.3.2) toward the cost of any of the following improvements deemed necessary at the intersection: installation of a traffic signal, or construction of a left-turn pocket on the Yosemite Avenue approach to Lake Road. Monitoring of the Lake/Yosemite intersection will end upon completion of the Campus Parkway extension from Yosemite Avenue to Bellevue Road; monitoring of other approach routes to the Campus will continue as described in Mitigation</i>	LS

LS: Less than significant; NI: No impact; PS: Potentially significant; S: Significant; SU: Significant and Unavoidable

Impact		Level of Significance Prior to Mitigation ¹	Mitigation Measures	Level of Significance Following Mitigation ¹
			<i>Measure 4.14-5 (Applicability—project level).</i>	
4.14-3	Construction of Phase 1 of the LRDP may result in excessive deterioration of County roads leading to campus and the need for physical expansion at the Lake/Yosemite intersection. This is considered a <i>potentially significant</i> impact.	PS	<p><i>4.14-3(a) The University will create a visual record of pavement surface condition along Bellevue Road (from Lake to Highway 59), and Lake Road (from the University entrance to Yosemite Avenue), and any other routes on which final haul plans indicate large truck traffic generated by campus construction would exceed 5% of existing traffic levels. The University will re-inventory pavement condition along these routes within two months following completion of Phase 1 construction, and either restore pavement to pre-construction condition or reimburse the responsible jurisdiction to perform restoration (less a reasonable allowance for deterioration caused by other traffic). (Applicability—project level)</i></p> <p><i>4.14-3 (b) The University will either: (1) restrict truck routing to/from the site to prohibit large trucks (with turn radius greater than 40-feet) from travel via Lake Road, or (2) pay the County to design and construct improvements to the intersection of Lake Road and Yosemite Avenue to accommodate the turn-radius of the largest expected construction vehicle. (Applicability—project level)</i></p>	LS
4.14-4	Implementation of the LRDP, in conjunction with regional growth in Merced County, would result in increased traffic levels in the vicinity of the campus site, and exceedances of the roadway LOS thresholds. This is considered a <i>significant</i> impact.	S	<p><i>4.14-4(a) The University will contribute its fair share (as described in Section 4.14.3.2) toward the following RTP Tier 2 roadway improvements:</i></p> <ul style="list-style-type: none"> • <i>Campus Parkway, extend from Yosemite Avenue to Bellevue Road</i> 	LS

LS: Less than significant; NI: No impact; PS: Potentially significant; S: Significant; SU: Significant and Unavoidable

Impact	Level of Significance Prior to Mitigation ¹	Mitigation Measures	Level of Significance Following Mitigation ¹
4.14-4 cont'd		<ul style="list-style-type: none"> • <i>Highway 59, widen to 4 lanes, Olive Avenue to Bellevue Road</i> • <i>Highway 59, new segment between Highways 99 and 140</i> • <i>Yosemite Avenue, extend from R Street to Highway 59</i> • <i>Yosemite Avenue, widen to 4 lanes, Campus Parkway to G Street</i> • <i>Bellevue Road, widen to 6 lanes, Highway 59 to Campus Parkway</i> • <i>R Street, extend from Yosemite Avenue to Bellevue Road</i> • <i>Parsons Avenue/Gardner Avenue, extend and widen to 4 lanes, Childs Avenue to Bellevue Road</i> • <i>Santa Fe Drive, widen to 6 lanes, Buhach Road to Highway 59</i> • <i>Intersection improvements along G Street between Highway 99 and Childs Avenue (Applicability—program level)</i> <p><i>4.14-4(b) Merced County, City of Merced, Caltrans, and MCAG can and should move expeditiously through project development processes to establish right-of-way and access management requirements along key routes affected by campus traffic. (Applicability- program level)</i></p>	

LS: Less than significant; NI: No impact; PS: Potentially significant; S: Significant; SU: Significant and Unavoidable

Impact		Level of Significance Prior to Mitigation ¹	Mitigation Measures	Level of Significance Following Mitigation ¹
4.14-5	In the case where full LRDP development occurs without the University Community, access routes to the campus through the University Community may not be constructed, resulting in significant level of service and emergency access impacts. This is considered a <i>potentially significant</i> impact.	PS	4.14-5 Merced County can and should and the University will establish rights-of-way and build campus access routes comparable to the extension of Campus Parkway from Yosemite Avenue to Bellevue Road, University Drive, and Commerce Drive, and McKee Road even if the University Community is not developed. (Applicability-program level)	LS
4.14-6	Improper phasing or programming of roadway mitigation projects during the development of the University could result in hazardous traffic conditions along approach routes. This is considered a <i>potentially significant</i> impact.	PS	4.14-6 The University will contribute its fair share (as described in Section 4.14.3.2) toward the annual monitoring of traffic conditions along major approach routes to the campus, and the implementation of interim improvements, if warranted. Improvements to be considered at the intersection of Bellevue Road and G Street will include installation of a traffic signal and construction of a left-turn pocket on the westbound Bellevue Road approach. (Applicability-program level)	LS
4.14-7	Implementation of the LRDP would place additional demand on regional and local transit services and would depend on high levels of transit service being deployed to connect the campus with major destinations within Merced County. This is considered a <i>less-than-significant</i> impact.	LS	No mitigation required	LS
4.14-8	Implementation of the LRDP would generate pedestrian and bicycle travel in higher concentrations and amounts than found in many other parts of the county. This is considered a <i>less-than-significant</i> impact.	LS	4.14-8 Merced County and the City of Merced can and should ensure adequate maintenance of the existing path along Lake Road and other regional bicycle and pedestrian facilities that provide access to the proposed campus. (Applicability-program level)	LS
4.14-9	It is possible that the campus may generate spillover parking that affects nearby parking areas of Lake Yosemite Regional Park and/or existing county roads	PS	4.14-9 The County can and should implement parking restrictions in sensitive areas around campus, such as recreational and residential parking permits and parking	LS

LS: Less than significant; NI: No impact; PS: Potentially significant; S: Significant; SU: Significant and Unavoidable

Impact		Level of Significance Prior to Mitigation ¹	Mitigation Measures	Level of Significance Following Mitigation ¹
	in the area (such as Lake Road and Bellevue Road). This is considered a <i>potentially significant</i> impact.		<i>time restrictions, and should provide aggressive enforcement of these restrictions. (Applicability-program level)</i>	
4.14-10	Implementation of the LRDP, in combination with the proposed University Community and regional growth in Merced County, would result in increased traffic levels in the vicinity of the campus site, and exceedances of the roadway LOS thresholds. This is considered to be a <i>significant</i> impact.	S	<p>4.14-10(a) <i>The University will contribute its fair share (as described in Section 4.14.3.2) toward the following RTP Tier 2 Roadway improvements:</i></p> <ul style="list-style-type: none"> • <i>Highway 59, widen to 4 lanes, Olive Avenue to Bellevue Road</i> • <i>Highway 59, new segment between Highways 99 and 140</i> • <i>Yosemite Avenue, extend from R Street to Highway 59</i> • <i>Yosemite Avenue, widen to 4 lanes, Campus Parkway to G Street</i> • <i>Bellevue Road, widen to 6 lanes, Highway 59 to Campus Parkway</i> • <i>R Street, extend from Yosemite Avenue to Bellevue Road</i> • <i>Parsons Avenue/Gardner Avenue, extend and widen to 4 lanes, Childs Avenue to Bellevue Road</i> • <i>Highway 59, new alignment along Mission Avenue</i> • <i>Mission Avenue, widen to 4 lanes, Highway 99 to Highway 59</i> • <i>Childs Avenue, widen to 4 lanes, Campus Parkway to Highway 59 (Applicability – program level)</i> 	SU
4.14-10				

LS: Less than significant; NI: No impact; PS: Potentially significant; S: Significant; SU: Significant and Unavoidable

Impact		Level of Significance Prior to Mitigation ¹	Mitigation Measures	Level of Significance Following Mitigation ¹
cont'd			<i>4.14-10(b) Merced County, City of Merced, Caltrans, and MCAG can and should move expeditiously through project development processes to establish rights-of-way and access management requirements along key routes affected by campus traffic (Applicability – program level).</i>	
4.15 Utilities				
4.15-1	Implementation of the LRDP would generate demand for potable water and require the construction of new water extraction and conveyance facilities. This is considered to be a <i>less-than-significant</i> impact.	LS	<i>No mitigation required.</i>	LS
4.15-2	Implementation of the LRDP would generate wastewater flows that would require the construction of new conveyance and treatment facilities. This is considered to be a <i>less-than-significant</i> impact.	LS	<i>No mitigation required</i>	LS
4.15-3	Implementation of the LRDP would generate solid waste that would not require the expansion of the regional landfill. This is considered to be a <i>less-than-significant</i> impact.	LS	<i>No mitigation required.</i>	LS
4.15-4	Implementation of the LRDP would require the extension of communication facilities. This is considered to be a <i>less-than-significant</i> impact.	LS	<i>No mitigation required.</i>	LS
4.15-5	Implementation of the LRDP would generate a demand for electricity for the proposed campus, which would require an extension of electric transmission lines. This is considered to be a <i>less-than-significant</i> impact.	LS	<i>No mitigation required.</i>	LS

LS: Less than significant; NI: No impact; PS: Potentially significant; S: Significant; SU: Significant and Unavoidable

Impact		Level of Significance Prior to Mitigation ¹	Mitigation Measures	Level of Significance Following Mitigation ¹
4.15-6	Implementation of the LRDP would generate a demand for natural gas which would require an extension of the natural gas pipelines. This is considered a <i>less-than-significant</i> impact.	LS	<i>No mitigation required.</i>	LS
4.15-7	Implementation of the LRDP together with other cumulative development will generate demand for wastewater treatment. This is considered a <i>less-than-significant</i> cumulative impact.	LS	<i>No mitigation required.</i>	LS
4.15-8	Implementation of the LRDP together with other cumulative development would increase in solid waste generation. This is a <i>less-than-significant</i> impact.	LS	<i>No mitigation required.</i>	LS
4.15-9	Implementation of the LRDP together with other cumulative developments would generate demand for electricity and natural gas. This is considered to be a <i>less-than-significant</i> impact.	LS	<i>No mitigation required.</i>	LS
6.1	Implementation of the LRDP would induce substantial economic and population growth in the region, and would result in the construction of additional housing. This growth is expected to result in <i>significant</i> environmental effects.	S	<i>No mitigation feasible beyond the measures identified in Section 4.</i>	SU

LS: Less than significant; NI: No impact; PS: Potentially significant; S: Significant; SU: Significant and Unavoidable

Table 6-2
SUMMARY OF IMPACTS AND MITIGATION MEASURES FOR PHASE 1 CAMPUS

Impact	Level of Significance Prior to Mitigation ¹	Mitigation Measures	Level of Significance Following Mitigation ¹	
3.2 Aesthetics				
3.2-1	Implementation of the Phase 1 Campus would not substantially degrade the visual qualities and character of the site and its surroundings. This impact is considered a <i>less-than-significant</i> impact.	LS	<i>No mitigation required.</i>	LS
3.2-2	Lighting for Phase 1 Campus buildings and other facilities would create a new source of light or glare that could spill onto Lake Yosemite Regional Park and other sensitive areas. This is considered a <i>significant</i> impact.	S	<i>See mitigation measure 4.1-4 in Table 6-1.</i>	SU
3.3 Air Quality				
3.3-1	Construction activities as part of development allowed under the Phase 1 Campus could result in short-term generation of fugitive dust (PM ₁₀). This is considered to be a <i>significant</i> impact.	S	<i>See mitigation measures 4.3-1(a)-(b) in Table 6-1.</i>	LS
3.3-2	Development of the Phase 1 Campus would generate increased levels of CO, O ₃ precursors (ROG and NO _x), and PM ₁₀ emissions. This is considered to be a <i>significant</i> impact.	S	<i>See mitigation measures 4.3-2(a), 4.3-2(c)-(e) in Table 6-1.</i>	SU
3.3-3	Development of the Phase 1 Campus would result in localized increases in CO concentrations from vehicular traffic at intersections, but CO concentrations would not exceed the significance criteria. This is considered to be a <i>less-than-significant</i> impact.	LS	<i>No mitigation required.</i>	LS
3.3-4	Development of the Phase 1 Campus would not generate significant emissions of toxic air contaminants from combustion sources and research laboratories.	LS	<i>No mitigation required.</i>	LS

Impact		Level of Significance Prior to Mitigation ¹	Mitigation Measures	Level of Significance Following Mitigation ¹
This is considered to be a <i>less-than-significant</i> impact.				
3.4 Biological Resources				
3.4-1	Development of the Phase 1 Campus would not result in the direct loss or adverse modification of wetlands or other waters of the U.S. that fall under the jurisdiction of the U.S. Army Corps of Engineers and the Regional Water Quality Control Board. Therefore, there would be <i>no impact</i> to these resources.	NI	<i>See mitigation measures 4.4-10(a)-(b) in Table 6-1.</i>	NI
3.4-2	Development of the Phase 1 Campus would not directly impact special status plant and wildlife species. Therefore, there would be <i>no impact</i> to special status plant and wildlife species.	NI	<i>No mitigation required.</i>	NI
3.4-3	Development of the Phase 1 Campus would not result in the direct loss of nesting habitat for resident and migratory avian species of special concern and raptors. This is considered to be a <i>less-than-significant</i> impact.	LS	<i>See mitigation measures 4.4-5(a)-(e) in Table 6-1.</i>	LS
3.4-4	Development of the Phase 1 Campus would not adversely affect habitat potentially used for movement of special status mammal species. This is considered to be a <i>less-than-significant</i> impact.	LS	<i>See mitigation measures 4.4-6(a)-(b) in Table 6-1.</i>	LS
3.4-5	Development of the Phase 1 Campus would not result in indirect impacts to wetlands and other undisturbed habitat adjacent to the 96-acre site. This is considered to be a <i>less-than-significant</i> impact.	LS	<i>See mitigation measures 4.4-7(a)-(h) in Table 6-1.</i> <i>Plus project specific mitigation measure:</i> 3.4-5 <i>The Phase 1 Campus shall avoid adverse changes to existing hydrological conditions that could result in increases, decreases or elimination of flows sustaining vernal pools and swales to the south and east of the Phase 1 Campus boundary. The Phase 1 Campus includes a buffer separating campus development from</i>	LS

Impact		Level of Significance Prior to Mitigation ¹	Mitigation Measures	Level of Significance Following Mitigation ¹
			<i>vernal pools and swales to the south and east. The University shall adjust the buffer width, or take such other appropriate steps, as may be necessary to assure no significant adverse changes occur in the biological functioning of the vernal pools and swales outside the Phase 1 Campus boundary due to increases, reductions or elimination of flows into those vernal pools.</i>	
3.4-6	Development of the Phase 1 Campus would not conflict with local applicable policies protecting biological resources or provisions of an adopted habitat conservation plan. Therefore, there would be <i>no impact</i> to local or regional policies for biological resources from the Phase 1 Campus.	NI	<i>No mitigation required.</i>	NI
3.4-7	Off-site improvements related to constructing utility lines for the Phase 1 Campus would have <i>no impact</i> to sensitive biological resources.	NI	<i>See mitigation measures 4.4-10(a)-(b) in Table 6-1.</i>	NI
3.4-8	Construction activities for the Phase 1 Campus would not result in temporary construction impacts to sensitive biological resources, including wetlands or special status plants and wildlife, adjacent to the project site. This is considered to be a <i>less-than-significant</i> impact.	LS	<p>3.4-8 <i>See Mitigation Measures 4.4-10(a)-(b) in Table 6-1, as well as the following project-specific mitigation measure. The Phase I Construction Mitigation Plan will include the following:</i></p> <ul style="list-style-type: none"> • <i>Preconstruction Surveys. The University will implement preconstruction surveys in habitats suitable for listed species within and adjacent to construction areas. These surveys are intended to augment previous surveys and will follow established protocols. Results of preconstruction surveys will be incorporated into the Phase I Construction Mitigation Plan.</i> • <i>Monitoring and Reporting. The University will designate environmental monitors who will be responsible for implementing construction</i> 	LS

Impact	Level of Significance Prior to Mitigation ¹	Mitigation Measures	Level of Significance Following Mitigation ¹
		<p><i>mitigation measures and reporting the status of contractors' compliance with mitigation requirements. The monitors will report directly to the University Environmental Manager. Monitoring reports will be filed with the Environmental Manager according to schedules determined based on potential for threats to listed species and other environmental resources as established in the Phase I Construction Mitigation Plan.</i></p> <ul style="list-style-type: none"> • <i>Incorporation of Species Protection Obligations into Contracts. All contracts between the University and contractors, between construction management firms, and subcontractors will include restrictions on disturbance of listed species and habitats. Specific penalties for violations will be specified, including warnings, removal of individual violators from the project, termination of contracts and payment of damages.</i> • <i>Training Program. Prior to initiating Phase I construction, all construction personnel will receive training described in the Phase I Construction Mitigation Plan. The purpose of the training program is to educate construction personnel of the sensitive nature of the areas adjacent to the Campus and their obligations to protect sensitive resources.</i> • <i>Incorporation of BMPs. Standard construction BMPs will be identified in the Phase I Construction Mitigation Plan, incorporated into construction designs and plans and specifications, and required of contractors during construction.</i> • <i>Construction Fencing. Prior to construction, temporary fencing will be installed along the</i> 	

Impact		Level of Significance Prior to Mitigation ¹	Mitigation Measures	Level of Significance Following Mitigation ¹
			<p><i>boundaries of the portion within the Phase I area under construction to prevent construction vehicles from straying beyond the Phase I boundary.</i></p> <ul style="list-style-type: none"> <i>Kit Fox Preconstruction Surveys. Kit fox preconstruction surveys will be included in the Phase I Construction Mitigation Plan and implemented in accordance with Mitigation Measure 4.4-6 and in the context of overall kit fox preconstruction survey guidelines that also require spotlighting and photo stations. If the species is not found during these surveys and examination of dens does not show evidence of use, dens will be eliminated.</i> <i>Invasive Species Control. To ensure that seeds from invasive species are not transported into the Phase I area by construction equipment, the Phase I Construction Mitigation Plan will require that all equipment be washed at designated wash stations to ensure that they are clean and generally free of seeds before entering the Campus.</i> 	
3.5 Cultural Resources				
3.5-1	Development of the Phase 1 Campus has the potential to disturb or destroy archaeological resources. This impact would be <i>potentially significant</i> .	PS	<i>See mitigation measures 4.5-1(a)-(d) in Table 6-1.</i>	LS
3.5-2	Development of the Phase 1 Campus has the potential to result in disturbance or destruction of Native American human remains. This is considered a <i>potentially significant</i> impact.	PS	<i>See mitigation measures 4.5-1(a)-(d) and 4.5-2(a)-(c) in Table 6-1.</i>	LS
3.5-3	Development of the Phase 1 Campus has the potential to disturb or destroy paleontological resources. This is considered a <i>potentially significant</i> impact.	PS	<i>See mitigation measures 4.5-4(a)-(b) in Table 6-1.</i>	LS
3.6 Geology, Soils and Seismicity				

Impact		Level of Significance Prior to Mitigation ¹	Mitigation Measures	Level of Significance Following Mitigation ¹
3.6-1	3.6-1 Implementation of the Phase 1 Campus would result in construction of facilities on expansive soils, creating risks to life or property. This is considered to be a <i>potentially significant</i> impact.	PS	<p>3.6-1(a) <i>If construction activities are performed during or subsequent to wet weather, implement measures to reduce excessive soil moisture and facilitate earthwork operations, such as disking to aerate, stabilization with a geotextile fabric or grid, or other similar, equally effective method.</i></p> <p>3.6-1(b) <i>Implement the site-specific measures regarding soil scarification and compaction, as identified in the Phase 1 Campus Geotechnical Investigation Report (Kleinfelder, Inc. 2001), for individual building sites.</i></p> <p>3.6-1(c) <i>Soils used for engineered fill shall meet the minimum requirements for moisture content as recommended in the Phase 1 Campus Geotechnical Investigation Report (Kleinfelder, Inc. 2001).</i></p>	LS
3.8 Hydrology and Water Quality				
3.8-1	Development of the Phase 1 Campus would not affect the quality of surface runoff water quality and would not result in a violation of water quality standards. Therefore, there would be <i>no impact</i> to these resources.	NI	<i>No mitigation required.</i>	NI
3.9 Noise				
3.9-1	Implementation of the Phase 1 Campus would result in traffic increases on the regional road network, which could significantly increase ambient noise levels. This is considered to be a <i>significant</i> impact.	S	<i>See mitigation measure 4.10-1 in Table 6-1.</i>	SU
3.9-2	Construction of Phase 1 Campus facilities could expose nearby receptors, especially users of the Lake Yosemite Regional Park, to elevated noise levels. This is considered to be a <i>potentially significant</i> impact.	PS	<i>See mitigation measures 4.10-3 and 4.10-5 in Table 6-1.</i>	LS
3.10 Recreation				

Impact		Level of Significance Prior to Mitigation ¹	Mitigation Measures	Level of Significance Following Mitigation ¹
3.10-1	Development of the Phase 1 Campus would increase the area population and result in an increased demand for recreational facilities, which could cause a deterioration of facilities. This impact is considered a <i>less-than-significant</i> impact.	LS	<i>See mitigation measures 4.13-1(a)-(d) in Table 6-1.</i>	LS
3.10-2	Development of the Phase 1 Campus would include construction of recreational facilities. The construction of these facilities would not have adverse physical effects on the environment beyond those discussed within the impact analysis for the LRDP. Therefore, this impact is considered <i>less than significant</i> .	LS	<i>No mitigation required.</i>	LS
3.11 Traffic, Circulation, and Parking				
3.11-1	Implementation of the Phase 1 Campus would result in exceedance of the level of service threshold at the Lake Road/Bellevue Road intersection. This is considered a <i>significant</i> impact.	S	3.11-1 <i>Install a traffic signal at the intersection of Lake Road and Bellevue Road, and widen the intersection to provide a left-turn lane on the northbound and eastbound approaches.</i>	LS
3.11-2	Implementation of the Phase 1 Campus may result in operational deficiencies at the Lake/Yosemite intersection. This is considered a <i>potentially significant</i> impact.	PS	3.11-2 <i>The County can and should analyze the expected future operations of the Lake/Yosemite intersection at the following milestone points: 1) on determination of the conceptual alignment for Campus Parkway, 2) on preparation of the Geometric Approval Drawings for Campus Parkway, and 3) each October, beginning in the opening year of the UC Merced campus. If any of these analyses determine that the Lake/Yosemite intersection will operate at unacceptable LOS, the University will contribute its fair share (as described in Section 4.14.3.2 of Table 6-1) toward the cost of any improvements deemed necessary at the intersection.</i>	LS
3.11-3	Construction of the Phase 1 Campus may result in excessive deterioration of County roads leading to campus and the need for physical expansion at the	PS	<i>See mitigation measure 4.14-3(a)-(b) in Table 6-1.</i>	LS

Impact		Level of Significance Prior to Mitigation ¹	Mitigation Measures	Level of Significance Following Mitigation ¹
	Lake/Yosemite intersection. This is considered a <i>potentially significant</i> impact.			
3.11-4	Increased traffic volumes during the development of the Phase 1 Campus could result in hazardous traffic conditions along approach routes. This is considered to be a <i>potentially significant</i> impact.	PS	<i>See mitigation measures 4.14-3(a) and 4.14-6 in Table 6-1.</i>	LS

LS: Less than significant; NI: No impact; PS: Potentially significant; S: Significant; SU: Significant and Unavoidable

7.1 CHANGES TO VOLUME 1 OF THE DRAFT EIR

7.1.A Executive Summary

The following changes to the Executive Summary of the Draft EIR are the result of internal review and comments received on the Draft EIR.

In Section ES-6, page ES-6, the following has been added to the areas of controversy known to the University:

Need for a combined Environmental Impact Report/Environmental Impact Statement.

Based on internal review, the following changes have been made to Table ES-1:

- On page ES-19, for Impact 4.4-3, the designation for Level of Significance Prior to Mitigation is “PS.”
- On page ES-20, for Impact 4.4-4, the designation for Level of Significance Prior to Mitigation is “PS.”

Impact 4.4-11, which dealt with the cumulative impact of the proposed project along with other cumulative development in the region, was not clearly presented in the Executive Summary Table ES-1 in the Draft EIR. The analysis of that impact on pages 4.4-68 through 4.4-71 concluded that cumulative impacts to listed special-status species and wetlands would be less than significant because these resources are afforded a high level of legal protection under the regulatory and permitting requirements of the permitting agencies. With respect to nonlisted special-status species that occur in the grassland habitats of the region, the Draft EIR concluded that although the proposed project, the University Community project, and the Campus Parkway project would reduce their respective impacts to a less-than-significant level, other development may not reduce or avoid impacts because these species are not afforded the same legal protections as the listed special-status species. Due to a clerical error, Table ES-1 in the Draft EIR did not make clear the distinct conclusions that were drawn with respect to the two groups of species in the body of the Draft EIR. That table has been revised to accurately reflect the two distinct conclusions reached regarding the two groups of species.

- On page ES-28, for Impact 4.4-11, the designation for Level of Significance Following Mitigation is “LS” for listed special-status species, and “SU” for nonlisted special-status species.

Note that the revised Executive Summary Table ES-1 is included in this Final EIR as Table 6-1.

7.1.B Project Description

The following changes and corrections to Section 2 “Project Description” of the Draft EIR are the result of internal review and comments received on the Draft EIR.

Per comment LA9-20, the first paragraph of Section 2.8.5, page 2-22, has been modified as follows:

At full development, the campus would generate approximately 39,815 tons of municipal solid waste per year, which would be disposed of at the Merced County Highway 59 landfill. The County of Merced Department of Public Works oversees the solid waste transportation and

disposal operations in Merced County. Solid wastes within the county are disposed of at one of the two landfill sites. The west side of the county is served by the Billy Wright Road Landfill ~~and the Dos Palos Transfer Station~~, while the eastern county is served by the Highway 59 Landfill and the Livingston Transfer Station. Garbage collection services in the county are provided by four municipal systems and six private companies. The 1998 revisions to the Merced County Year 2000 General Plan estimated the remaining capacity of the Highway 59 site at 6 years, and at 8 years for the Billy Wright Road site. The future landfill needs of the county will be accomplished through expansion of one of these sites. An expansion was approved for the Highway 59 landfill in 2001 that increased the overall area (including nondisposal areas) of the landfill from about 175 acres to 610 acres. Of this increase in area, 140 acres were approved for waste disposal (the remaining acreage was for wetlands preservation and infrastructure. With the approved 140-acre expansion, this landfill has a projected life up to 2035 (Lawrie 2001). ~~A proposed 37.5-acre expansion of the Billy Wright Road site would add 6 years' capacity.~~

Per comment LA5-6, the second paragraph on page 2-26 has been modified as follows:

As noted earlier, the campus site is largely undeveloped grazing land. There are, however, existing facilities on site. These include the Merced Hills Golf Course, located on the southern 197 acres of the site, the two irrigation canals, Yosemite Lateral (~~a drainage ditch~~ an irrigation canal on the golf course), and a hydroelectric power plant owned by MID, and a barn and corral located in the northern portion of the campus site.

Per comment LA5-7, Figure 2-9 has been revised to remove the pedestrian path shown erroneously along Lake Yosemite shoreline. Per comments LA6-14 and LA5-1, Figure 2-12 has been revised to show no discharge of site runoff into Le Grand Canal and Yosemite Lateral.

7.1.C Demographic Characteristics

The following changes and corrections to Section 3 “Demographic Characteristics” of the Draft EIR are the result of internal review and comments received on the Draft EIR.

Per comment O13-8, Table 3-1 on page 3-2 has been modified as follows:

**Table 3-1
2000 Existing Population in Merced County**

	Merced County Association of Governments ¹	DOF Projections (extrapolated from 1990 Census)	2000 Census Population Data
City of Merced	70,544	63,330	63,893
City of Atwater	28,545	22,566	23,113
Other Cities	45,547	42,698	45,621
Total Cities	144,636	128,594	132,627
Unincorporated Area	70,620	81,544	77,927
Total Merced County	215,256	210,138	210,554

Source: MCAG, 2001; DOF, 2000; U.S. Census 2000.

Other cities: Dos Palos, Gustine, Livingston, and Los Baños

¹MCAG's estimate of existing population by city is not by current city limits, but by the relevant city's growth area boundary.

Per comment O13-8, the first paragraph on page 3-2 has been modified as follows:

MCAG has ~~calculated~~ projected growth rates with and without the proposed campus. MCAG projections are based on the ~~an average annual growth rate of 2.3 percent for the County as a whole~~ CDOF's County Population Projects (December 1998), with additions made for UC-related growths (EPS 2000). ~~The Merced County Association of Governments~~ MCAG currently estimates that without the development of the campus, the population of the unincorporated part of Merced County would increase to 99,320 in 2025.

Per comment O13-8, Table 3-2 on page 3-2 has been modified as follows:

**Table 3-2
Current Merced County Population Projections**

Jurisdiction	Projected -Growth Rate	2000	2005	2010	2015	2020	2025
UC Merced and UC community	--	0	384	3,088	8,220	14,066	21,682
Other Unincorp. Area	0.9 - 7.1%	70,620	75,754	81,094	86,203	92,519	99,320
Unincorporated Total		70,620	76,138	84,182	94,423	106,585	121,002
City of Merced	2.2%	70,544	81,263	92,014	100,706	108,505	115,346
City of Atwater	1.2%	28,545	31,557	34,291	35,798	36,468	36,430
All other cities	1.5 - 4.0%	45,547	53,888	63,436	73,857	86,377	100,392
Total Cities		144,636	166,708	189,741	210,361	231,350	252,168
Grand Total: Cities, Unincorporated and UC	2.3%	215,256	242,846	273,923	304,784	337,935	373,170
Department of Finance (July 1, 2001)		214,400	239,900	266,700	292,400	322,700	N/A

7.1.D Agricultural Resources

The following change to Section 4.2 “Agricultural Resources” of the Draft EIR is the result of internal review and comments received on the Draft EIR.

In response to comment SA12-10, the third bulleted item on page 4.2-3 of the Draft EIR has been modified as follows:

Farmland of Local Importance is ~~pasture land and other agricultural land identified by the local jurisdiction as being important that has physical characteristics that would qualify it for Prime Farmland or Farmland of Statewide Importance except for the lack of irrigation water. This land also may produce crops that are not listed under Unique Farmland but are important to the economy of the county or city.~~

In response to comment SA12-11, the second complete paragraph on page 4.2-3 of the Draft EIR has been changed as follows:

Officially known as the California Land Conservation Act, the Williamson Act program was authored by former assemblyman John Williamson and adopted in 1965. The California Department of Conservation administers the Williamson Act program. The program allows land used in farming or ranching to be taxed at a rate based on the actual use of the land for agricultural purposes as opposed to its unrestricted market value. In return, the landowner commits to restricting use of the land to agricultural or open space for at least 10 years. The County of Merced has offered a Williamson Act program since July 2000. Currently about 700

property owners have entered into Williamson Act agreements in Merced County, and about 60,000 acres are under this program in the county. None of the 2,000 acres comprising proposed campus lands are protected under the Williamson Act, nor are there any properties registered under the Williamson Act in the vicinity (Forest, 2001). Some lands under Williamson Act contracts are located to the east of University Community. Figure 4.2-1 shows the distribution of farmland in the project area.

In response to comment SA12-12, the paragraph under Impact 4.2-3 on page 4.2-6 of the Draft EIR has been changed as follows:

According to the 1998 FMMP report, Merced County has approximately ~~289,067~~ 289,057 acres of prime farmland, 160,066 acres of farmland of statewide importance, and 96,593 acres of unique farmland, for a total of 545,726 acres of Important Farmlands in these three categories. Cumulative development will result in conversion of an appreciable portion of these lands to nonagricultural uses, as explained below.

The fifth sentence of the last paragraph on page 4.2-6 has been revised as follows:

Development of the University Community adjacent to the campus would result in the conversion to urban uses of ~~4,449~~ 1,437 acres of prime farmland, unique farmland, or farmland of statewide importance.

7.1.E Air Quality

The following changes and corrections to Section 4.3 “Air Quality” of the Draft EIR are the result of internal review and comments received on the Draft EIR.

Per comment SA9-4, Table 4.3-1 on page 4.3-5 has been modified to reflect the revised federal ozone status. The revised table is presented on the next page.

Per comment SA9-4, the second paragraph on page 4.3-6 has been modified as follows:

Under the EPA’s general conformity rule (40 CFR Parts 53 and 91), a detailed analysis of conformity with state air quality implementation plans is required if a project exceeds the established *de minimis* level of emissions. In addition, the conformity rule requires that the proposed project must be consistent with emission growth factors (land use and population forecasts that were used to generate emission forecasts) contained in the local air district’s clean air plan. The *de minimis* levels for O₃ are set for the precursors ROG and NO_x and are assumed to be 25 tons per year consistent with the new federal attainment status of San Joaquin Valley as severe for O₃. NO_x is a criteria pollutant, which would normally contain a *de minimis* level of 100 tons per year; however, as NO_x is a precursor to O₃, the *de minimis* level is restricted to 25 tons per year. The *de minimis* levels for O₃ and PM₁₀, as a federal nonattainment pollutant, ~~are 50 and is 70 tons per year, respectively, as they are federal nonattainment pollutants.~~ The *de minimis* level for NO_x and CO, as an attainment pollutants, are is 100 tons per year. The full campus is included in the SJVUAPCD Air Quality Attainment Plan; as such the project is consistent with emission growth factors contained in that plan.

Based on internal review, the third paragraph on page 4.3-7 has been modified as follows:

Before CCAA passage, the SJVUAPCD’s primary role was stationary source control of industrial processes and equipment. After the passage of the CCAA and CAA Amendments, air districts were directed to implement transportation control measures and were encouraged to employ indirect source control programs to reduce mobile source emissions. In San Joaquin Valley, the Transportation Planning Agencies have been assuming primary responsibility for identifying and implementing transportation control measures.

**Table 4.3-1
State and Federal Ambient Air Quality Standards**

Pollutant	Averaging Time	California Standards ^a	National Standards ^b		San Joaquin Valley State Status/Classification	San Joaquin Valley National Status/Classification
		Concentrations ^c	Primary ^{c,d}	Secondary ^{c,e}		
Photochemical Oxidants ^f	8-hour 1-hour ^g	-- 0.09 ppm	0.08 ppm 0.12 ppm	Same as Primary	Nonattainment/ Severe	Nonattainment/ Serious Severe
Carbon Monoxide	8-hour 1-hour	9.0 ppm 20.0 ppm	9 ppm 35 ppm	Same as Primary	Attainment/ None	Attainment/None
Nitrogen Dioxide	Annual Mean 1-hour	-- 0.25 ppm	0.053 ppm --	Same as Primary	Attainment/ None	Attainment/None
Sulfur Dioxide	Annual Mean	--	0.03 ppm	--	Attainment/ None	Attainment/None
	24-hour	0.04 ppm	0.14 ppm	--		
	3-hour	--	--	0.5 ppm		
	1-hour	0.25 ppm	--	--		
Fine Particulate Matter (PM ₁₀)	Annual Mean	--	50 µg/m ³ --	Same as Primary --	Nonattainment/ Serious	Nonattainment/ None
	Annual Geometric Mean	30 µg/m ³	--	--		
	24-hour	50 µg/m ³	150 µg/m ³	Same as Primary		
Fine Particulate Matter (PM _{2.5})	Annual Mean	--	15 µg/m ³	Same as Primary	Not Designated/ None	Not Designated/ None
	24-hour	--	65 µg/m ³			

Notes: ppm = parts per million, µg/m³ = micrograms per cubic meter

^a California standards, other than carbon monoxide, sulfur dioxide (1-hour), and fine particulate matter, are values that are not to be equaled or violated. The carbon monoxide, sulfur dioxide (1-hour), and fine particulate matter standards are not to be violated.

^b National standards, other than ozone, the 24-hour PM_{2.5}, the PM₁₀, and those standards based on annual averages, are not to be exceeded more than once a year. The 1-hour ozone standard is attained when the expected number of days per calendar year with maximum hourly average concentrations above the standard is equal to or less than one. The 8-hour ozone standard is attained when the 3-year average of the annual fourth highest daily maximum concentration is less than 0.08 ppm. The 24-hour PM₁₀ standard is attained when the 99th percentile of 24-hour PM₁₀ concentrations in a year, averaged over 3 years, at the population-oriented monitoring site with the highest measured values in the area, is below 150 µg/m³. The 24-hour PM_{2.5} standard is attained when the 98th percentile of 24-hour PM_{2.5} concentrations in a year, averaged over 3 years, at the population-oriented monitoring site with the highest measured values in the area, is below 65 µg/m³. The annual average PM_{2.5} standard is attained when the 3-year average of the annual arithmetic mean PM_{2.5} concentrations, from single or multiple community oriented monitors is less than or equal to 15 µg/m³.

^c All measurements of air quality are to be corrected to a reference temperature of 25° C and a reference pressure of 760 mm of mercury (Hg) (1013.2 millibar); ppm in this table refers to ppm by volume, or micromoles of pollutant per mole of gas.

^d National Primary Standards: The levels of air quality deemed necessary by the federal government, with an adequate margin of safety, to protect the public health.

^e National Secondary Standards: The levels of air quality deemed necessary by the federal government, to protect the public welfare from any known or anticipated adverse effects to a pollutant.

^f Measured as ozone.

^g The 1-hour ozone standard will be replaced by the 8-hour standard on an area-by-area basis when the area has achieved 3 consecutive years of air quality data meeting the 1-hour standard.

Per comment SA9-4, the first paragraph on page 4.3-8 has been modified as follows:

The Federal Clean Air Act Amendments require that areas classified as “moderate” nonattainment and above (the San Joaquin air basin is a “~~serious~~ severe” nonattainment area for O₃) show reasonable further progress towards attainment by demonstrating that emissions reduction milestones are being achieved. Districts must prepare “rate of progress plans” to show this emissions reduction achievement. The *1999 Ozone Rate of Progress Report* demonstrated that the target level of emissions or milestones for 1997–1999 (9 percent) and for 1990–1999 (24 percent) were met. However, the 1994 OADP failed to demonstrate achievement of the federal ozone standards because basinwide monitoring data continued to show exceedances of the federal ozone standard, so a new plan is currently being prepared.

Based on internal review, the second paragraph on page 4.3-8 has been modified as follows:

The SJVUAPCD does not meet the NAAQS for PM₁₀. The District is designated as serious nonattainment for PM₁₀ and required to reach attainment of both the annual and 24-hour standards by December 31, 2001. However, the 24-hour standard will not be achieved before December 31, 2001. The *PM₁₀ Attainment Demonstration Plan* demonstrates attainment of the annual standard by December 31, 2001. Therefore, the District is requesting that the EPA grant a 5-year extension so that the District can achieve both the annual and 24-hour standards by December 31, 2006. The *PM₁₀ Attainment Demonstration Plan* describes present and future efforts pursued by the District to attain and maintain federal PM₁₀ NAAQS by December 31, 2006. On May 5, 1999, the USEPA found that portions of that plan, including the mobile source emission budgets, were inadequate. No further action has been taken to revise the plan. On November 1, 2001, a number of environmental groups led by Earth Justice filed suit against the USEPA for not ensuring that an adequate PM₁₀ plan is developed.

Based on internal review, the third paragraph on page 4.3-9 has been modified as follows:

The SJVUAPCD has entered into a memorandum of understanding with all of the Valley Transportation Planning Agencies including the Merced County Association of Governments MCAG and Council of Fresno County Governments. This memorandum of understanding ensures a coordinated approach in the development and implementation of the transportation plans required by the CCAA and the CAA.

Per comment O24-24, the last paragraph on page 4.3-11 has been modified as follows:

Ozone (O₃) is a secondary pollutant that forms as a result of the interaction between ultraviolet light, Reactive Organic Gases (ROGs) and NO_x. ROGs and NO_x are primary pollutants that are emitted directly into the environment, ~~primarily~~ generated by motor vehicle operation (approximately 35 to 40 percent) and emitted as exhaust, but also generated by stationary and area sources. Secondary or indirect pollutants are formed in the atmosphere, usually as the result of a chemical reaction involving primary pollutants. The major effects of O₃ and the other components of photochemical smog include reductions in plant growth and crop yield, chemical deterioration of various materials, and the irritation of the respiratory system and eyes.

Per comment O24-24, the first complete paragraph on page 4.3-12 has been modified as follows:

A highly reactive molecule, O₃ readily combines with many different components of the atmosphere. Consequently, high levels of O₃ tend to exist only while high ROG and NO_x levels are present to sustain the O₃ formation process. Once the precursors have been depleted, O₃ levels rapidly decline. Motor vehicles ~~are primary sources~~ contribute approximately 35 to 40 percent of ROGs and NO_x. Because of the direct link between vehicular emissions and O₃ formation, air quality programs focus on reduction of mobile source emissions. Significant reductions in O₃ have been achieved through the state-mandated inspection program.

In February 2001, the Supreme Court upheld the new 8-hour O₃ standard and PM_{2.5} standard. Some months prior to that, most states submitted a list of areas that violated the 8-hour O₃ standard. San Joaquin Valley does violate the 8-hour O₃ standard according to monitoring data. However, neither San Joaquin Valley nor any other area has been officially designated by the USEPA as an 8-hour nonattainment area. According to the USEPA, designations will not be made until 2005, and plans will not be due until 2007. The 1-hour severe area O₃ plan currently under development shows that roughly 30 percent reductions in both ROGs and NO_x will be needed to attain the 1-hour standard. These reductions will contribute greatly to achieving the 8-hour standard although modeling to determine whether the reductions will result in attainment has not yet been done.

Per comment SA9-4, the first complete paragraph on page 4.3-14 has been modified as follows:

The entire San Joaquin Valley, which includes the project area, has been classified as a ~~serious~~ severe nonattainment area for O₃ by the EPA. The EPA has also designated San Joaquin Valley as being in serious nonattainment for PM₁₀. The CARB has also designated this area as nonattainment under the CAAQS for these same pollutants. The designation of an area as attainment or nonattainment is based on monitored data throughout the air basin, which comprises all counties in San Joaquin Valley. Thus, although the pollutant monitoring station in Merced may show no exceedances of some of the standards for “nonattainment” pollutants (the Federal Standard for O₃ for 2000, for example), elsewhere in the air basin the monitored data do show exceedances. In addition, monitoring and modeling studies show that emissions in Merced and other northern counties contribute to monitored O₃ exceedances in Fresno and Kern counties.

Per comment FA1-17, the third paragraph on page 4.3-21 has been revised as follows:

Fugitive dust (PM₁₀) emissions from the Phase 1 Campus construction were estimated to be 32 tons per year, and with implementation of dust-control mitigation measures, the emissions would be reduced to 9 tons per year. This is based on an assumed ~~403~~ 96 acres to be graded, 25 of which would be graded on the worst-case day (the URBEMIS model guidance suggests that 25 percent of total acreage would be disturbed on the worst day). These are expected to be the maximum PM₁₀ emissions associated with any of the construction projects within the LRDP, because the Phase 1 Campus is anticipated to be the largest construction project for the campus. These emissions would be considered less than significant when compared to any air district’s thresholds, where such quantitative thresholds exist.

Based on internal review and comments SA9-3 and O24-29, the following has been added to Mitigation Measure 4.3-2(a) on page 4.3-27:

Consult with the SJVAPCD when future projects are proposed as to the best feasible construction equipment control technology at that time.

Construction equipment rated greater than 100 horsepower shall have, to the extent feasible, diesel exhaust controlled by use of catalyst-based diesel particulate filters.

Based on internal review, the fourth bulleted item of Mitigation Measure 4.3-2(c) on page 4.3-27 has been revised as follows:

Provide facilities to accommodate alternative-fuel vehicles such as electric cars and CNG vehicles to address impacts from contributions to the regional emissions of criteria pollutants.

Based on internal review and comments SA4-3 and SA9-2, the following has been added to Mitigation Measure 4.3-2(d) on page 4.3-27:

The campus will use the guidance provided by the CARB with respect to selection of landscaping materials that do not produce smog or pollen.

The campus will allow for the use of pellet stoves to reduce emissions from area sources.

7.1.F Biological Resources

The following changes and corrections to Section 4.4 “Biological Resources” of the Draft EIR are the result of internal review and comments received on the Draft EIR.

In response to comment O28-16, the table on pages 4.4-2 and 4.4-3 of the Draft EIR has been modified, and is presented on the next page.

In response to comment LA5-9, the following editorial change has been made in Section 4.4.2.2, first paragraph, last sentence (page 4.4-8):

Irrigation canals and watercourses located within the campus site include Le Grand Canal, ~~Fairview~~ Fairfield Canal, Yosemite Lateral, and the headwaters of Cottonwood Creek.

In response to comment LA5-10, the following change has been made to the last sentence of the first complete paragraph on page 4.4-13:

~~Irrigation water is discharged via the canals from approximately March to September, depending upon irrigation needs. season may vary depending upon the water year, with the maximum season being March 1 – October 31 annually.~~

Based on internal review and several comments regarding the Draft EIR (refer to Section 4.8.C.2 of this Final EIR), Impact 4.4-1 (page 4.4-47) has been changed to the following:

- 4.4-1 Development under the LRDP would result in a substantial adverse effect on ~~federally protected~~ wetlands delineated using the 1987 USACE delineation manual. This is considered to be a *potentially significant* impact.

Based on several comments regarding Mitigation Measure 4.4-1 in the Draft EIR (refer to Section 4.8.D of this Final EIR), the mitigation measure has been revised to the following:

- 4.4-1(a) *The University of California shall develop and implement a Resource Mitigation Program to be reviewed and approved by the USACE, USFWS and CDFG through the state and federal permit processes. The Resource Mitigation Program shall result in the acquisition and preservation of substantial acreages of vernal pool-dominated grassland habitat and other wetland resources throughout eastern Merced County and the restoration, enhancement or creation of wetland resources within these preserved areas. The Resource Mitigation Program shall be designed to address impacts on wetlands and associated upland habitat and the special status species that depend upon those habitats. With respect to wetlands in particular, the Resource Mitigation Program shall be designed to satisfy a "no net loss of wetland functions" standard in connection with campus development.*

The RMP will be carried out by the University in close coordination with the Wildlife Conservation Board (WCB) and other parties.

Areas to be preserved under the Resource Mitigation Program will be protected in perpetuity by conservation easements held by a third party and, in some cases, may include or by transfer to the University of California Natural Reserve System. The Resource Mitigation Program shall include a plan for the monitoring and management of preserved wetland and upland habitats, based upon adaptive management principles, that ensures the ongoing funding of those efforts (which may be from external sources, such as the WCB or grant funds) and incorporates measures (e.g., grazing management, restrictions on rodenticides, watershed protections and other measures) necessary to maintain the biological diversity and integrity of native flora and fauna relative to existing or enhanced conditions. It is anticipated that direct monitoring and management of preserve lands by UC (and associated funding obligations) will generally be limited to lands owned or leased by the University, and that monitoring and management of non-UC-controlled preserve properties will be conducted by a third party. The RMP

Species	Previous Status	Current Status	Date Listed
Fresno kangaroo rat	NL	Fed E/--	September 1994
Greene's tuctoria	NL	Fed E/--	March 1997
Hairy Orcutt grass	NL	Fed E/--	March 1997
San Joaquin Orcutt grass	NL	Fed E/--	March 1997
Vernal pool tadpole shrimp	NL	Fed E/--	March 1997
Colusa grass	NL	Fed T/--	March 1997
Hartweg's golden sunburst	NL	Fed T/--	February 1997
San Joaquin adobe sunburst	NL	Fed T/--	February 1997
Succulent owl's clover	NL	Fed T/--	January 1985
Mountain plover	NL	Fed PT/SSC	February 1999
Swainson's hawk	NL	Fed State T	*
American bittern	NL	Fed SC/--	*
Beaked clarkia	NL	Fed SC/--	*
Black tern	NL	Fed SC/SSC	*
Hollisteria	NL	Fed SC/--	*
Merced kangaroo rat	NL	Fed SC/--	*
Molestan blister beetle	NL	Fed SC	*
Short-eared owl	NL	Fed SC/SSC	*
Tricolored blackbird	NL	Fed SC/SSC	*
Western burrowing owl	NL	Fed SC/SSC	*
Long billed curlew	NL	Fed SC/SSC	*
Horned lark	NL	--/SSC	*
Merlin	NL	--/SSC	*
Northern harrier	NL	--/SSC	*
Northwestern pond turtle	NL	--/SSC	*
Prairie falcon	NL	--/SSC	*
Southwestern pond turtle	NL	--/SSC	*
Hoover's spurge	NL	CNPS 1B	*
Dwarf downingia	NL	CNPS 2	*
Pincushion navarretia	NL	CNPS 2 1B	*
Shining navarretia	NL	CNPS 2 1B	*
Wright's trichcoronis	NL	CNPS 2	*
Spiny coyote thistle	Fed 2	Fed SC/--	*
Hoover's calycadenia	Fed 2	Fed SC/--	*
Merced phacelia	Fed 2	Fed SC/--	*
Ferruginous hawk	Fed 2/SSC	Fed SC/--	*
Loggerhead shrike	Fed 2/SSC	Fed SC/--	*
Bald eagle	E/ State E	Fed D/--	*
White-tailed kite	SSC	FP	*

Notes:

*State and federal species of concern and CNPS species are typically more informal than federally listed species and do not have dates of listing.

Federal Status Codes:

- E = Endangered. Species in danger of extinction throughout all or a significant portion of its range.
T = Threatened. Species likely to become endangered within the foreseeable future.
PT = Proposed for listing as threatened.
C = Candidate for listing.
SC = Special-concern species.

California Status Codes:

- E = Endangered. Species whose continued existence in California is in jeopardy.
T = Threatened. Species likely to become endangered within the foreseeable future.
SSC = California Department of Fish and Game species of special concern.
FP&P = Fully protected and protected species defined in the State of California under Sections 3511 and 4700 of the Fish and Game Code.

California Native Plant Society Status Codes:

- 1B = Plants that are rare, threatened, or endangered in California and elsewhere.
2 = Plants that are rare, threatened, or endangered in California, but more common elsewhere.

Other Status Codes:

- D = Delisted.

will also include siting, design and construction elements incorporating the various measures described in this EIR to avoid and minimize effects on wetlands and protected species that would otherwise arise from the construction and operation of the Campus (see Section 4.08(D)(2)).

~~The total number of acres of grassland habitat to be preserved under the Resource Mitigation Program will be driven by the implementation of a combination of wetland specific mitigation ratios set forth below. The combined effect of these mitigation ratios, which address the preservation, creation and enhancement of specific wetland types, are expected to result in the preservation of approximately 1,152 to 1,728 acres of vernal pool dominated grasslands in eastern Merced County. Given that the Main Campus will result in the permanent disturbance of about 684 acres of vernal pool dominated grassland habitat, this represents an overall mitigation ratio (i.e., impacted habitat to preserved habitat) of approximately 1:7 to 2.5:1, which will mitigate impacts on both wetland and upland species occurring within the Campus site.~~

Lands to be acquired for preservation under the Resource Mitigation Program shall be selected in accordance with a number of criteria intended to ensure a broad look at the values and functions of the lands under consideration. These factors shall include, among others, the following:

Species composition

Species diversity

Density of special status species populations

Proportion of native vs. nonnative species

Utilization of both wetland and upland characteristics by special status species

Utilization as a migration corridor for wildlife species

Concentrations of rare plant populations or important geographic segments of rare plant populations

Connectivity with regional conservation efforts

Watershed size

Wetland density

Soil and substrate types

Wetland hydrology

Potential for future direct or indirect impacts

Preserve areas shall be compatible with requirements imposed by USACE, USFWS and CDFG during the state and federal permit processes.

~~To ensure no net loss of wetland functions and values due to development of the Main Campus, the Resource Mitigation Program shall include a plan for wetland preservation, creation and enhancement to be accomplished within the lands preserved through the Program. This Program is designed to achieve a minimum overall ratio of a total of 3 acres of wetlands preserved, restored, enhanced or created for every 1 acre of impact (3:1 ratio). Table 4.4-4 summarizes the proposed Resource Mitigation Program as it applies to wetlands.~~

To satisfy the "no net loss of wetland functions" standard articulated above, the Resource Mitigation Program will include -- in addition to its preservation component -- a variety of wetland enhancement, restoration and creation activities to be conducted within the lands preserved under the Resource Mitigation Program. The RMP will rely on existing USACE guidance and implementation of accepted functional assessment methodologies such as hydrogeomorphic modeling (HGM) in determining the appropriate combination of compensatory strategies in achieving a no overall net loss of wetlands functions. Mitigation Measures 4.4-1(b) through (d) further describe the proposed wetland

compensation strategy targeted at achieving no net loss of wetland functions and to be included in the Resource Mitigation Program. Mitigation Measure 4.4-1(b) describes the ~~proposed~~ wetland preservation that would be implemented for all wetland impacts. Mitigation Measure 4.4-1(c) describes proposed enhancement and restoration measures, and that would be implemented for impacts to vernal pools, swales, and clay playa wetland habitats. Mitigation Measure 4.4-1(d) describes the proposed wetland restoration and creation measures that would be implemented for impacts to seasonal freshwater marsh wetland habitats.

These measures described minimum preservation and restoration, enhancement and creation ratios intended to achieve the no net loss goal articulated in this measure (Applicability-program level).

4.4-1(b) Preservation. The preservation component of the Resource Mitigation Program shall require the preservation of existing wetlands of comparable functions and values at a minimum ratio of 2:1. A minimum of 10 acres of wetlands- vernal pool dominated grasslands preserved for every 1 acre of wetlands filled due to vernal pool dominated grasslands developed on the proposed campus (≥10:1). For example, assuming that 800 acres of the Main Campus are fully developed, a total of 8,000 acres of comparable habitat will be preserved under this measure. Although preserved vernal pool habitat shall should generally include sufficient acreage of associated upland habitat (i.e. annual grasslands) to assure comparable vernal pool densities within grassland areas that are roughly comparable to those existing within the Main Campus area, maintenance of existing hydrology and otherwise protect the integrity of the preserved wetlands area. It is expected that at least 18 acres of vernal pool dominated grasslands will be preserved for every acre of vernal pool filled. This expectation is based upon the 9:1 ratio of annual grasslands to wetlands in the Main Campus area. Vernal pool densities within particular preservation areas may vary from those on the Main Campus provided the overall mitigation program (including creation, restoration and enhancement components) results in satisfaction of the no net loss standard articulated above. (Applicability^{3/4}program level).

4.4-1(c) Enhancement. The Resource Mitigation Program shall require the restoration or enhancement of vernal pool habitat or clay playas at a minimum ratio of 1 acre of enhanced or restored existing clay playa or vernal pool habitat for every 1 acre of clay playa or vernal pool habitat lost as a result of development under the LRDP (a 1:1 acreage ratio). Existing, degraded wetlands and associated annual grasslands shall be acquired and managed to enhance the habitat value for special status species and increase the diversity and cover of native plant species in the wetlands and uplands. The lands preserved under the Resource Mitigation Program will provide opportunities for enhancement of wetland functions and habitat. For example, managed grazing practices have been found to improve the quality of vernal pools. Other examples include implementation of measures to improve water quality, flood retention and wildlife habitat. Many of these enhancement measures have been included in the terms of the conservation easements already secured through WCB funding and thus generated enhancement benefits. No particular enhancement ratio will be specified in the Resource Mitigation Program. Rather, enhancement opportunities will be evaluated and incorporated into specific preservation efforts as required to satisfy the "no net loss of wetland functions" standard articulated in this Mitigation Measure 4.4-1 (Applicability-program level).

4.4-1(d) Restoration and Creation. The Resource Mitigation Program shall require the creation of new wetlands at a minimum ratio of 1 acre of new wetlands created for every 1 acre of seasonal freshwater marsh wetlands filled under the LRDP (a 1:1 acreage ratio). Created wetlands are generally anticipated to be seasonal freshwater marsh or other seasonal wetland habitats to compensate for impacts to these types of wetland habitats. It is not anticipated that significant vernal pools and swales or clay playa wetlands will be created because of the limited availability of suitable sites and the uncertainties associated with creation of these wetland types. The Resource Mitigation Program will include creation of vernal pools and swales or clay playas as mitigation for impacts to such habitats only if this approach is determined to be feasible and acceptable to the USACE.

The Resource Mitigation Program will require the establishment of new wetlands within preserved areas, through restoration or creation as described more fully below, as necessary to facilitate achievement (together with preservation and enhancement efforts) of the no net loss of wetland function goal articulated in this Mitigation Measure 4.4-1. To the extent practicable, these restoration/creation efforts

will result in 1 acre of newly established wetland for every acre filled (i.e., a minimum of 89 acres of wetland area). Both restoration and creation involve manipulation of existing physical, chemical and/or biological characteristics to establish wetlands. Restoration re-establishes a previously existing wetland that has been destroyed or degraded to the extent that it no longer functions as a wetland. Creation activities seek to establish functioning wetlands where they previously did not exist.

The goal of both restoration and creation efforts is to establish wetlands that are similar to the impacted wetlands in terms of physical and biological characteristics. To the extent that the characteristics of identified mitigation sites allow, the composition of the restored and created wetlands will be roughly proportional to the impacted wetlands in terms of their hydrogeomorphic characteristics and plant communities. Thus, the resulting restored and created wetlands will be "in-kind." It may not be practicable or possibly desirable to establish certain types of impacted aquatic habitats such as ephemeral channels or seasonally saturated wetlands. In those cases, out-of-kind wetland restoration and/or creation would be the preferred approach under the Resource Mitigation Program. Out-of-kind wetland restoration and/or creation may also be preferred under the Resource Mitigation Program if there is insufficient or inadequate land available to satisfy the requirements to successfully restore or create certain types of wetlands.

The wetlands establishment component of the Resource Mitigation Program will focus first on restoration activities. Compensation habitat to be restored must demonstrate acceptable restoration potential. The level of restoration achievable, and feasibility of success, will depend on a number of factors including: the need for grading or fill removal, restorability of the hydrology, soil suitability and presence of intact hardpans or claypans, and availability of suitable seed sources. An ideal site will show evidence of the historic occurrence of vernal pools. In the event restoration sites are unavailable, creation activities would be undertaken to the extent suitable lands are available. To compensate for loss of vernal pool functions, creation efforts will focus first on establishment of vernal pools. If mitigation lands that meet requisite soils, hydrology, and vegetative criteria for vernal pool establishment are unavailable, the University will create, to the extent practicable, seasonal wetlands or emergent marsh habitats as replacement acreage for vernal pools. To the extent restoration/creation at a 1:1 ratio proves impracticable, then the University may rely on preservation and enhancement efforts to achieve the "no net loss of wetland function" standard articulated in this Mitigation Measure 4.4-1 as demonstrated through appropriate functional assessment methodologies such as HGM.

Any proposal for wetland restoration or creation ~~or enhancement~~ (pursuant to Mitigation Measure 4.4-1(c) above), including the final configuration of proposed wetlands (size, shape, depth, etc.), will be based upon the completion of soils, hydrologic and other studies confirming the feasibility of the restoration or creation ~~or enhancement~~ proposal and shall include USACE-approved measures intended to ~~ensure~~ facilitate occupancy by special status and other wetland-dependent species (e.g., plantings, collection of topsoil and inoculation of target areas). Created or restored wetlands will be located in areas that have been preserved under the Resource Mitigation Program, and in perpetuity by conservation easements or held by a third party by transfer to the University of California Natural Reserve System and monitored and managed as described in Mitigation Measure 4.4-1(b) above. ~~Moreover, created or enhanced wetlands will be evaluated for a period of at least 5 years to ensure conformance with success criteria (e.g., target habitat characteristics, success of plantings, etc.) to be developed in conjunction with USACE and other agencies (Applicability-program level).~~

Based on several comments regarding the Draft EIR (refer to Section 4.8.D.3 of this Final EIR), Mitigation Measure 4.4-2 on page 4.4-55 has been changed to the following:

- 4.4 ~~The University shall collect seed from special status plant populations prior to the loss of the populations in the Main Campus area. Seed collection shall be conducted by a qualified botanist or restoration biologist. Collected seeds will be dispersed within suitable habitat. Seeds shall be dispersed only within suitable habitats not currently occupied by the affected plant species, to avoid impacts on the genetic composition of existing populations.~~

The collected seed shall be dispersed in suitable habitat within the annual grassland, vernal pool, and clay playa habitats preserved in conjunction with loss of wetland habitat (Impact 4.4-1) and/or annual grassland habitat (Impact 4.4-1), if feasible. However, if mitigation lands to serve both purposes cannot be found, the University shall be responsible for negotiating a conservation easement with a land owner in the vicinity such that a minimum of one special status plant population is preserved in perpetuity for every one population of the same species affected.

Conservation easements secured under the RMP will assure the preservation of two special-status plant populations for each single population of the same species affected. In addition, preserved plant populations would be selected based on the following criteria:

- Proximity to the UC Merced Campus site – known populations of an affected plant species within a 10-mile radius, including the VST lands, would be preserved by acquisition of fee title or a conservation easement on a “willing seller” basis pursuant to the RMP. Populations greater than 10 miles from the Main Campus site would be preserved only if populations within 10 miles are not available.*
- Population size (e.g., number of individuals per population) – preserved populations will be approximately the same size (number of individuals) as the affected populations (e.g., if an affected population consists of 100 plants the University will preserve a minimum of two populations with each population comprising a minimum of 100 plants).*
- Land acquired to preserve special-status plants will be preserved in perpetuity and will include sufficient buffers to protect the plants from reasonable perturbations. Whenever possible, the limits of preserved lands will be based on defensible barriers such as watershed boundaries, roads, canals, or fencelines.*
- As described in Mitigation Measure 4.4-1, the University will ensure availability of funding for development and management of the preserved plant populations. The RMP includes preparation of the Campus Land Reserve and Campus Natural Reserve Management Plan will specify monitoring requirements, adaptive management strategies, grazing strategies, fencing, and invasive species control on the Campus Land Reserve and Campus Natural Reserve. The University, NRS, VST or other third party also will implement management and monitoring activities on the remaining VST lands under conservation easements (Applicability–program level).*

Based upon internal review and several comments received on the Draft EIR (refer to Section 4.8.D.4 of this Final EIR), Mitigation Measure 4-4.3 on page 4.4-56 has been changed to the following:

4.4-3(a) ~~The University shall conduct preconstruction surveys within 1,500 feet of a breeding site to capture and relocate adult California tiger salamanders. Salamanders will be captured using both passive and active strategies. Barriers will be placed along the perimeter of construction areas during the fall prior to the start of ground disturbance. Barriers will be constructed to divert salamanders away from the construction area. In addition, nocturnal surveys will be conducted during the wet season prior to the start of ground disturbance. All salamanders encountered during nocturnal surveys will be captured and relocated by a qualified biologist to suitable sites within the acquired mitigation lands. To minimize the potential for loss of individual CTS during project construction, the following measures will be required for construction of specific projects occurring within 0.25 miles of breeding ponds located within the Campus Land Reserve and Campus Natural Reserve:~~

- Pre-construction surveys for CTS will be conducted by an independent, qualified biologist at the beginning of the rainy season prior to construction of any specific development project within the Main Campus that would affect potential CTS habitat. Surveys will be conducted in accordance with CDFG standard procedures for pre-construction surveys. If CTS are found in the construction areas, the University will consult with CDFG and USFWS to determine if salvage of salamanders is warranted, and if so, what method should be used. The construction area will be calculated and identified on construction drawings, and the area of impact will be monitored by the contractor during construction.*

- Construction vehicles will be limited to a speed of 10 miles per hour in the vicinity of identified breeding ponds. This speed limit will be stipulated in all construction contracts, included in environmental, health, and safety training for construction personnel, and enforced through regular monitoring of construction sites subject to this restriction. Any fuel on these sites will be double contained and excess asphalt will be removed from the site upon completion of construction.
- Construction activities within 0.25 mile of breeding ponds: drift fences (e.g., silt fences or other effective salamander barriers) will be erected around the construction area at the beginning of the CTS breeding season (before November 15) prior to the start of construction to exclude breeding CTS from the construction site. Fencing will be maintained for the duration of construction.
- Construction activities that are more than 0.25 mile from breeding ponds: drift fences (e.g., silt fences or other effective salamander barriers) will be erected around the construction area at the beginning of the CTS breeding season (before November 15) prior to the start of construction to exclude breeding CTS from the construction site. Fencing will be maintained for the duration of construction.
- If approved by the USFWS and CDFG, drift fences would be installed to redirect CTS toward preserved habitat areas within the Campus Natural Reserve and surrounding VST property that do not already support existing healthy CTS populations under existing conditions or where habitat has been created pursuant to the RMP (see Mitigation Measure 4.4-1) may be specifically designed to provide proper conditions for CTS (Applicability–project level).

4.4-3(b) Although construction of the Main Campus would result in minimal impacts to breeding pond habitat, the following additional measures would be implemented:

- Existing stock ponds on the Campus Natural Reserve and VST property would be enhanced to provide breeding habitat for CTS by eliminating nonnative fish and amphibian populations and modifying pond size (where needed) to improve hydrologic characteristics favorable to CTS.
- Pond hydrology would be modified to discourage the establishment of predators such as bullfrogs and fish.
- Ponds will be monitored annually to document breeding CTS and identify the presence of nonnative fish or amphibians. Nonnative species will be removed if they are observed (Applicability–program level).

4.4-3(c) The University shall improve upland habitat for CTS by managing ground squirrel activity on the Campus Natural Reserve and the remaining VST lands under conservation easement (Applicability–program level).

Based upon internal review and comments O25-16, O26-22, O28-34, and O28-96 (refer to Section 4.8.D.5 for this Final EIR), Mitigation Measure 4.4-4(a) on page 4.4-58 has been revised as follows:

4.4-4(a) Grassland Management Strategies. The University shall develop site-specific management plans for the Campus Natural Reserve and other properties secured under conservation easements and preserved, enhanced, or restored as mitigation for the LRDP. These management plans shall include strategies to promote the following goals:

- manage grazing to enhance special status species populations
- manage the use of rodenticides and herbicides to enhance upland habitats for special status species
- develop supplemental watering areas outside of natural wetlands (e.g. watering troughs for cattle) (Applicability–program level)

The Campus Land Reserve and Campus Natural Reserve Management Plan and management measures pursuant to the conservation easement on the remaining VST lands will be implemented. Site-specific grassland management plans will include grazing management strategies designed to enhance federally listed species populations and habitat. Grazing management strategies will include:

- Appropriate grazing regimes to optimize habitat conditions for federally listed species
- Grazing regimes to reduce livestock impact on habitat
- Measures to prevent fuel build-up

The Campus Land Reserve and Campus Natural Reserve Management Plan and VST conservation easements will include measures to control invasive plants and animals. In addition to the grazing management strategies, additional measures to control invasive plants and animals would be implemented, including monitoring of nonnative plant populations in the monitoring area in accordance with Mitigation Measure 4.4-7, leash laws, signage programs, and other measures required by Mitigation Measure 4.4-7.

The Campus Land Reserve and Campus Natural Reserve Management Plan will include monitoring of both areas, with more intensive monitoring of the Campus Land Reserve and less intensive monitoring of the Campus Natural Reserve (Applicability—program level).

Based upon several comments received on the Draft EIR (refer to Section 4.8.C.4 of this Final EIR), the following has been added to Mitigation Measure 4.4-6 on page 4.4-62:

4.4-6(c) The University will construct artificial dens for kit fox on the Campus Natural Reserve and lands under conservation easements at distances of approximately 0.5 miles from the edge of the Main Campus (Applicability—program level).

Based upon several comments received on the Draft EIR (refer to Section 4.8.C.7 of this Final EIR) and additional information gathered since its publication, the following change has been made to Mitigation Measure 4.4-7(a) on page 4.4-65:

4.4-7(a) Potential adverse indirect impacts to areas outside of the Campus site would be mitigated by ~~incorporation of a 250-foot-wide monitoring area at the interface between the Main Campus and the adjacent Campus Land Reserve and Campus Natural Reserve.~~ These areas would be periodically monitored and maintained by Campus maintenance crews to verify that the monitoring area is meeting the following performance criteria:

- Prevents the flow of surface runoff from the Campus site to wetlands in the monitoring area
- No increase in nonnative species abundance or distribution within the monitoring area
- No substantial degradation of wetland biota or water quality in the monitoring area relative to reference wetlands in the Campus Land Reserve or Campus Natural Reserve is observed
- The University shall develop a monitoring and management plan for this monitoring area that will be coordinated with the Resource Mitigation Program outlined in Mitigation Measure 4.4-1(a-d) (Applicability—program level).

Based upon comments received regarding the Draft EIR (refer to Section 4.8.C.8 of this Final EIR) and additional information gathered since its publication, the following has been added to Mitigation Measure 4.4-7 (page 4.4-65):

Outdoor Lighting

4.4-7(i) To reduce light spill effects, the following measures will be implemented:

- All outdoor lighting on the Main Campus site will be directed downward to minimize potential spill-over of night-time lighting into adjacent undeveloped lands.
- Where appropriate, outdoor light sources within 1,000 feet of the Main Campus-Campus Land Reserve boundary would be limited to low-pressure sodium lighting with luminous outputs of 1,800 lumens or less.

Where appropriate, outdoor light sources greater than 4,050 lumens will be fitted with the best commercially available shielding.

Where appropriate, outdoor light sources less than 4,050 lumens will be partially shielded (i.e., shielded or constructed so that no more than 10 percent of the light rays emitted by the fixture, either directly from the lamp or indirectly from the fixture, project above the horizontal plane running through the lowest point on the fixture) to prevent light from being directed upward.

All outdoor light sources greater than 4,050 lumens will be turned off between 11:00 p.m. and 6:00 a.m., except where this is precluded by public safety considerations (Applicability-program level).

Predation by Pet Species

4.4-7(j) The University will install a woven hog wire fence (i.e., 2-inch mesh) on a 24- to 30-inch lower panel to reduce entry of dogs to the adjacent lands surrounding the Main Campus.

4.4-7(k) The University would adopt and enforce leash laws for dogs on Campus.

Conservancy Fairy Shrimp

4.4-7(l) The University will strictly limit access to the Conservancy fairy shrimp pool by fencing or other means.

- The Campus security force will patrol the Campus Land Reserve and Campus Natural Reserve lands, specifically in the vicinity of the Conservancy fairy shrimp pool, to assure human disturbance of the area is minimized.
- The University will implement an enforcement program and will limit trespassing into the Conservancy fairy shrimp area.
- The University will implement a training program for its security personnel and campus maintenance crews assigned to the Campus Natural Reserve area to educate such personnel on the protection of the natural resources within the Campus Natural Reserve.
- Educational and research uses of the Campus Land Reserve and Campus Natural Reserve will be carefully managed to prevent harm to listed species and their habitats.
- Appropriate restrictions will be incorporated into future grazing leases to prohibit incompatible uses (Applicability-program level).

Wetlands Acreages

Since the publication of the Draft EIR, wetland delineation on the project site has been revised in consultation with the USACE. The Final EIR provides the best estimate of jurisdictional wetlands that may be affected by the project. The acreages provided are based upon the revised delineation completed in November 2001 and several weeks of additional verification studies conducted by the USACE, the USEPA, and the consultant team. Based upon the revised delineation and verification process, the primary change in wetlands areas from that referenced in the Draft EIR to the Final EIR results from differences in the interpretation and application of the USACE criteria for delineating wetlands. These differences primarily are attributed to the hydrology criterion, and exclusively affect areas identified as clay flats in the Draft EIR. The most significant alteration of wetlands assessment as presented in the Draft EIR and the Final EIR involve areas defined in the Draft EIR as clay flats. Clay flats were recognized in the draft delineation as a habitat feature that is complex and problematic. In brief, the original delineation of the clay flats relied on field observations of the presence or absence of surface inundation or saturation at the time of the field surveys. The revised delineation discounted these observations and relied primarily on the observance of secondary hydrology indicators such as concentrated hoof prints, oxidized rhizospheres and a positive facultative neutral test. There were also some differences in the characterization of plant communities between the original and revised delineations. This was probably attributable to the different seasons in which the two field studies were conducted.

Although the total acreage of jurisdictional wetlands has increased within the Campus boundaries, the revised wetland acreages do not represent substantive changes in the project's impacts because the clay flats were described in the Draft EIR in as much detail as other habitats within the project area, including jurisdictional wetlands. Moreover, the Draft EIR quantified the areas of the existing clay flats and acknowledged that impacts to this community could occur with development of the Main Campus. The revised wetland acreages reflect a change in the interpretation as to whether all or parts of these clay flats meet the established criteria of jurisdictional wetlands.

The revised wetland acreages reported for the category of seasonal wetlands in revised Table 4.4-3 of this Final EIR include combined acreages for clay fan, clay flat and seasonal wetlands.

Table 4.4-3
Distribution of Habitat Types at the Campus site and on the VST/CST Property
(in Acres)¹

Area	Main Campus	Campus Land Reserve	Campus Natural Reserve	Total Campus site	VST/CST Property (including the Campus site)
Annual Grasslands	684 671	268 266	648 615	1,600-1,552	9,131
Jurisdictional Waters/Wetlands					
Irrigation Canals	20 22	--	--	20-22	25 ³
Vernal Pools and Swales	58 60	40 32	67 58	165-150	795
Clay playas	6 1	30 26	28 16	64-43	109
Seasonal Freshwater Marshes	14 28	2 16	7 61	23-105	112
Subtotal (Wetlands)	78 89	72 74	102 135	252-298	10,172
Developed Area ²	128	-	-	128	128
Total	910	340	750	2,000	10,300

¹ Acreages presented in round numbers.

² Not all of the 197 acres on the Merced Hills Golf Course are developed.

³ Canal acreage presented for the VST/CST property includes the portions of Yosemite Lateral, Fairfield, and Le Grand canals on the Main Campus site, plus an additional portion of the Le Grand Canal to the east of the Campus Natural Reserve. MID's Main Canal, located to the northwest of Yosemite Lake, was not included in the canal acreages.

The acreages reflected in the revised Table 4.4-3 above are based on further evaluation of the Campus site and are hereby adopted throughout the text of this Final EIR. All references to acreages of annual grasslands, irrigation canals, vernal pools and swales, clay playas, and seasonal freshwater marsh in the Final EIR are now represented by the totals presented above.

7.1.G Geology, Soils, and Seismicity

The following change to Section 4.6 "Geology, Soils, and Seismicity" of the Draft EIR is the result of internal review and comments received on the Draft EIR.

Based upon comment LA5-12, Mitigation Measure 4.6-3 (page 4.6-14) has been revised as follows:

- 4.6-3(a) During Prior to project-specific building design, a site-specific geotechnical study 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 inspection of the levees of the Fairfield Canal and Le Grand Canal for any construction site near or spanning over the canals. 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 seismic hazards shall be identified. In addition, recommendations for adequate building design, including excavation and fill requirements for any identified soils constraints, shall be included in the analysis. These recommendations shall be included and implemented in the project design (Applicability–project level).
- 4.6-3(b) The UC Merced Policy and Procedures Manual will include a “Pest Management” section on management practices to control rodent activities on the Main Campus. The Campus and MID will cooperatively monitor levees for rodent burrows (Applicability–program level).

7.1.H Hydrology and Water Quality

The following changes and corrections to Section 4.8 “Hydrology and Water Quality” of the Draft EIR are the result of internal review and comments received on the Draft EIR.

To clarify the description of some facilities in response to comment LA5-14, the last paragraph on page 4.8-8 has been changed as follows:

Main Canal is generally a north-to-south-flowing irrigation canal that feeds Lake Yosemite, a constructed reservoir that is owned, operated, and maintained by MID. ~~Both In addition, Main Canal and Lake Yosemite are is operated and maintained by the Merced Irrigation District (MID) as well.~~ The capacity of Lake Yosemite is approximately 7,425 acre-feet (MID website, 2001). The CVRWQCB Basin Plan lists beneficial uses of Lake Yosemite as contact and other noncontact recreational, warm and cold freshwater habitat, and wildlife habitat. The CVRWQCB Basin Plan does not list Lake Yosemite as an irrigation beneficial use; however, MID has stated that it operates and maintains Lake Yosemite as a surface water regulating reservoir that is a vital part of MID’s distribution system (MID, 2001).

The first full paragraph on page 4.8-9 has been modified as follows:

Lake Yosemite feeds two MID irrigation canals, the Fairfield and Le Grand canals. The proposed campus site includes portions of both Fairfield and Le Grand canals. ~~The two irrigation canals~~ Fairfield Canal generally flows north to south while Le Grand Canal flows east to west, although on the campus site ~~they both~~ are generally aligned east-west. Both canals are unlined and are 50 to 60 feet wide at maximum water level. Le Grand Canal intercepts all runoff between Lake Yosemite and Rascal Creek. Two box barrel siphons, with a capacity in excess of 500 cfs, allow the creek to be bypassed. Floodwater released from Lake Yosemite or collected as local drainage is released into Rascal Creek at the creek crossing (HDR Engineering, Inc., 1998). The storm drainage collected from the area between the Le Grand and Fairfield canals is intercepted by the Fairfield Canal (MID, 2001). Fairfield Canal also helps to drain excess floodwater from Lake Yosemite. Floodwater released into Fairfield Canal, along with intercepted local drainage from between the Le Grand and Fairfield canals, empties into Bear Creek just downstream of the Rascal Diversion Channel (HDR Engineering, Inc., 1998).

Per comment LA5-14, the second paragraph on page 4.8-9 has been modified as follows:

~~The operational regime of the MID system is to open the irrigation gates at Lake Yosemite on March 31 and close them on October 31. By order of the Division of Safety of Dams, both the~~

Fairfield and Le Grand Canal headgates are fully open during the flood control operation of Lake Yosemite (between November 1 and March 1). During storm events, the Fairfield Canal headgates are closed to maintain storm water flow in the canal at 425 cfs or less, as feasible. During the irrigation season, the Fairfield and Le Grand Canals deliver irrigation water to downstream agricultural users in the Merced area during this time, and the headgates are regulated as necessary to meet this demand. During the winter months, Lake Yosemite acts as flood control detention, releasing excess flows to Le Grand Canal. Water levels in Lake Yosemite can be increased to serve demand by importing water from the Merced River via an upstream canal.

Based upon several comments received regarding the Draft EIR (refer to Section 4.12.D), Mitigation Measure 4.8-6 has been added to address Impacts 4.8-6 and 4.8-10. It should be noted that these impacts were identified in the Draft EIR as less-than-significant and do not require mitigation.

4.8-6 The University will install high water level shutoff sensors at Campus storm drainage pumping stations to regulate discharges into Fairfield Canal (Applicability-program level).

In response to comment LA5-1, the third paragraph on page 4.8-9 has been modified to read:

Yosemite Lateral is a small irrigation and drainage channel that is located along the access road to the Merced Hills Golf Course clubhouse. This MID-controlled channel serves minor irrigation users and eventually discharges into Cottonwood Creek just north of Yosemite Avenue. ~~A portion of the northwestern campus, near the county park, would discharge an estimated maximum of 10 cubic feet per second of storm water to the lateral during significant storms.~~

Also in response to comment LA5-1, the last paragraph on page 4.8-26 has been changed as follows:

Site drainage patterns would be altered as a result of the construction of the proposed campus because site runoff would be directed into detention and retention ponds and then into the Fairfield Canal for final discharge into Bear Creek, about 6 miles south of the campus. To ensure that Cottonwood Creek is not adversely affected, a small amount of site runoff (about 5 cubic feet per second [cfs]) after detention would be discharged into Cottonwood Creek below Fairfield Canal. Thus, Cottonwood Creek would continue to receive as much water as it has in the recent past. ~~During large storms, additional water (up to 15 cfs) could be discharged into Cottonwood Creek via Yosemite Lateral, a small irrigation feature on the campus site.~~ Because Cottonwood Creek would not receive substantially increased volumes of storm water from the site, the potential for downstream erosion or siltation would be reduced. An analysis was conducted of estimated existing discharges in Cottonwood Creek at its confluence with Yosemite Lateral and the incremental water that would be added to the creek by the campus during large storms. The analysis showed that the 15 to 20 cfs added by the project would represent less than 3 percent of the flows in Cottonwood Creek at the discharge point, which would be an insignificant increase and would not cause downstream erosion or flooding.

7.1.1 Noise

The following changes and corrections to Section 4.10 “Noise” of the Draft EIR are the result of internal review and comments received on the Draft EIR.

Mitigation Measure 4.10-2 has been added to address Impact 4.10-2 on page 4.10-18:

4.10-2 The Campus will work with the Merced County Parks and Recreation Division to coordinate the schedule of special events on both the Campus and in the park to avoid nuisance effects (Applicability-program level).

Per comments LA9-14 and LA9-15, the following changes have been made to Mitigation Measure 4.10-3 on page 4.10-19:

- 4.10-3 *Prior to initiation of campus construction, the University shall approve a construction noise mitigation program including but not limited to the following:*
- *Construction equipment shall be properly outfitted and maintained with feasible noise reduction devices to minimize construction-generated noise.*
 - *Stationary noise sources such as generators or pumps shall be located away from noise sensitive land uses as feasible.*
 - *Prior to major construction activities within 300 feet of Lake Yosemite Regional Park, the University (or the University's contractor) will coordinate with the County Parks and Recreation Division to reduce noise effects on planned events at the park.*
 - *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. (Applicability-program level).*

7.1.J Population, Employment, and Housing

The following change to Section 4.11 “Population, Employment, and Housing” of the Draft EIR is the result of internal review and comments received on the Draft EIR.

On page 4.11-5, Impact 4.11-3 has been renumbered to Impact 4.11-2.

7.1.K Public Services

The following changes and corrections to Section 4.12 “Public Services” of the Draft EIR are the result of internal review and comments received on the Draft EIR.

Per comment LA3-1, the fourth paragraph on page 4.12-4 of the Draft EIR has been revised to read:

~~CDF is responsible for addressing wildland fires in the area, while the County of Merced Fire Department is responsible for the protection of structures~~ wildland fire suppression with automatic assistance from the Merced County Fire Department through agreement. The Campus site is designated by CDF as being in a “very high” Fire Hazard Severity Zone. The fire season extends from late spring to fall. During this time of year, CDF provides assistance to the County Fire Department with wildland fire protection.

Per comment LA3-3, the last paragraph on page 4.12-4 has been modified to read:

The Merced County Fire Department maintains 19 fire stations, has approximately 80 vehicles, and has a staff of over 325 paid-call firefighters (Wellf Wells 2001). The services the Department provides include comprehensive fire protection planning, fire suppression and recovery, fire inspections, public education and control, and mitigation of hazardous materials emergency incidents. First-responder level Emergency Medical Services, including rescue and extrication, are also provided.

Per comment LA3-2, the first complete paragraph on page 4.12-5 in the Draft EIR has been revised to read:

The Merced County Fire Department station at 3360 North McKee Road is responsible for the Lake Yosemite area. Located approximately 3 miles from the project site, the McKee Road station is staffed 24 hours per day by one full-time firefighter and 15 volunteer personnel. The McKee Road response area is approximately 150 square miles and response times vary. The goal for this area is an arrival response time of the application of extinguishing agent to a fire or provision of Medical First Responder assistance within 10 minutes of dispatch. Currently, the McKee Road Station's area is considered underserved.

Per comment LA3-3, the final reference on page 4.12-16 has been modified to read:

~~Wellf Wells, T. 2001. Fire Chief, County of Merced Fire Department Battalion Chief, Merced County Fire Department~~, personal communication with DCE, March 15, 2001.

7.1.L Traffic, Circulation, and Parking

The following changes and corrections to Section 4.14 "Traffic, Circulation, and Parking" of the Draft EIR are the result of internal review and comments received on the Draft EIR.

A list of references for Section 4.14 was inadvertently omitted from the Draft EIR. It is provided in Appendix C of this Final EIR.

In response to comment O13-14 and internal review, the second to the last paragraph on page 4.14-6 has been modified to read:

- **G Street** - G Street is a north-south roadway extending from Highway 99 to La Paloma Road, where it turns into Snelling Road. G Street is a four-lane roadway south of Yosemite Avenue, narrowing to two lanes north of Yosemite Avenue. G Street carries ~~almost 20,000~~ about 30,000 vehicles per day within the City, and 6,100 ~~daily~~ vehicles per day north of the city limits.

In response to comment O13-16 on the Draft EIR, the following change has been made to the second paragraph on page 4.14-11:

Regional Transportation Plan. The Regional Transportation Plan (RTP) provides a comprehensive long-range view of transportation issues, opportunities and needs for Merced County. It establishes the goals, objectives and policies for future transportation improvements. The plan identifies the actions that should be taken, and the funding needs and options available for successful implementation. For a description of the transportation improvement projects contained in the RTP and the ways in which those projects were incorporated in this analysis, please see the sections on Planned Improvements – Regional and Local Roadway Network and Analytical Methods. Following are the most relevant goals, objectives, and policies contained in the 2001 RTP.

Goal 1: A safe and efficient regional road system that accommodates the demand for movement of people and goods.

Objective 1.1: Maintain a level of service "D" on all regionally significant roads.

Policy 1.1.1: Fund and implement the projects identified on the Tier 1 priority list in the Action Element of the RTP.

Policy 1.1.2: Aggressively pursue discretionary Caltrans funding such as Interregional Improvement Program, Highway Bridge Replacement and Rehabilitation Program, and Hazard Elimination and Safety Program funding.

- Policy 1.1.3: Implement a Regional Impact Fee for Transportation to pay for congestion relief projects.
- Policy 1.1.4: Aggressively pursue the passage of a ½ percent sales tax for transportation.
- Objective 1.2: Identify and prioritize improvements to the regional road system.
- Policy 1.2.1: Prepare and apply evaluation criteria to prioritize regional road projects identified to improve the overall transportation system of the region.
- Policy 1.2.2: Evaluation criteria will evaluate how the projects achieve the following objectives: (1) an integrated and balanced road system, (2) improvement in traffic flow and safety, (3) minimum adverse environmental effects, and (4) minimum adverse impacts on agricultural land.
- Policy 1.2.3: Use Regional Improvement Program funds to finance the prioritized regional improvements.
- Objective 1.3: Use the existing street and road system in the most efficient possible manner to improve local circulation.
- Policy 1.3.1: Maintain street and road system for vehicle travel, transit services, bicycle travel, and pedestrians.
- Policy 1.3.2: Aggressively pursue the passage of a ½ percent sales tax for transportation.
- Policy 1.3.3: Continue to exchange Federal Transportation Enhancement Activities and Surface Transportation Program funding for state dollars.
- Policy 1.3.4: Aggressively pursue all available and potential fund sources to implement improvements to the present transportation system and maintain the transportation system.
- Objective 1.4: Monitor the impact of development on the regional road system.
- Policy 1.4.1: Prepare and maintain transportation land use databases for determining future travel demand on the regional road system.
- Policy 1.4.2: Develop and maintain a regional transportation model.
- Policy 1.4.3: Analyze the cumulative impact of local development for the county and cities through the RTP Updates.
- Goal 2: Provide an efficient, effective, coordinated regional transit system that increases mobility for urban and rural populations, including transportation for disadvantaged persons.
- Objective 2.1: Meet all transit needs that are “reasonable to meet.”
- Objective 2.2: Increase transit ridership at rate that exceeds annual population growth rate.
- Policy 2.2.1: Add additional routes and expand services as necessary to meet ridership demand to achieve established transit standards.

- Policy 2.2.2: Provide improved transit service through the countywide Consolidated Transit System.
- Policy 2.2.3: Plan for transit expansion with arrival of UC Merced.
- Policy 2.2.4: Coordinate countywide transit system with neighboring transit services and modes – Stanislaus, Madera, Amtrak, and YARTS.
- Objective 2.3: Promote citizen participation and education in transit planning.
- Objective 2.4: Promote transit ridership to and from Mariposa County and Yosemite National Park.
- Goal 3: A rail system that provides safe and reliable service for passengers and goods movement.
- Objective 3.1: Maintain adequate passenger service on Amtrack San Joaquin route.
- Objective 3.2: Establish a high-speed rail system connecting Merced and Los Baños to Sacramento and the San Francisco Bay Area.
- Goal 5: A fully functional and integrated air service and airport system complementary to the countywide transportation system.
- Objective 5.1: Maintain daily commercial airline service to the Bay Area.
- Goal 6: A regional transportation system for bicyclists and pedestrians.
- Objective 6.1: Develop and construct bike and walkway facilities in urban areas and other communities where nonmotorized systems do not currently exist.
- Policy 6.1.1: Construct class I, II, and III bike routes as designated in the Merced County Regional Bikeway Plan.
- Policy 6.1.2: Actively pursue bicycle and pedestrian related funding sources to implement local and regional plans.
- Goal 7: Provide economical, short-range solutions to transportation problems such as traffic congestion.
- Objective 7.1: Apply TSM strategies to problems for which they can be most productive.
- Goal 8: Reduce usage of nonrenewable energy resources for transportation purposes.
- Objective 8.1: Increase public transit and carpooling, vanpooling and bicycling, and walking to exceed population growth.
- Goal 10: Provide economical, long-term solutions to transportation problems by encouraging community designs that encourage walking, transit, and bicycling.
- Objective 10.1: Innovative land use and transportation planning.

- Policy 10.1.1: Assist cities and County in assessing their existing road network system to find the problem areas and to identify necessary improvements that would improve traffic movement.
- Policy 10.1.2: Evaluate land use strategies for member jurisdictions.
- Objective 10.2: Plan future roads to accommodate land uses at a regional level.
- Policy 10.2.1: Assist member jurisdictions in taking a regional approach in land use and developing a road network that serves the entire region.
- Policy 10.2.2: Encourage all jurisdictions to actively participate in the RTP Update process.
- Objective 10.3: Roads that are pedestrian friendly, and that encourage bicycle trips and the use of mass transportation systems.
- Policy 10.3.1: Assist member jurisdictions in developing and implementing strategies and design criteria that make new commercial and residential developments friendly to pedestrian and bicyclists.
- Objective 10.4: Preserve productive farmland and land that provides habitat for rare, endangered or threatened species.
- Policy 10.4.1: Consider impacts on prime farmland and areas that support protected wildlife.
- Objective 10.5: Goals and policies consistent at both the regional and local levels.
- Policy 10.5.1: Assist cities and County during their General Plan updates to ensure that the plans are consistent with the RTP.
- Goal 11: Develop and support financing strategies that provide for a continuous implementation of the RTP projects and strategies.
- Objective 11.1: Develop and adopt policies that will provide adequate funding resources for all transportation modes and strategies.
- Policy 11.1.1: Seek voter approval of ballot measure for a 1 percent or ½ percent per dollar increase in the sales tax, for transportation system maintenance and improvements.
- Policy 11.1.2: Support preparation and approval of a regional transportation development fee program for priority road and transit improvement projects.
- Policy 11.1.3: Provide technical assistance to local jurisdictions in the development of transportation financing mechanisms.
- Policy 11.1.4: Consider cost efficiency in project evaluation criteria.

In response to comment SA14-2, the following LRDP policies have been included in the list of relevant policies provided on page 4.14-20 in Section 4.14.2.4 of the Draft EIR:

Land Use

CLU-5: Integrate campus land use patterns, transportation and circulation systems, and open space systems with those of the adjoining community, particularly in the area of the Town Center.

CLU-7: Develop the campus in a compact fashion to minimize impacts on the land, cost of infrastructure, and to ensure a pedestrian and bicycle-friendly environment.

SUST-1: Recognize principles of sustainable development, and incorporate them into the overall plan form, layout, infrastructure, operations, and into the design and construction of facilities.

Based on comments and internal review, Table 4.14-3 on page 4.14-24 of the Draft EIR has been revised as follows: in the Highway 59 segment for Yosemite Avenue to Olive Avenue, the number of lanes in 2025 is 2.

In response to comment LA9-1, the following changes have been made to Mitigation Measure 4.14-2 on page 4.14-31:

4.14-2 *The County can and should analyze the expected future operations of the Lake/Yosemite intersection at the following milestone points: (1) on determination of the conceptual alignment for Campus Parkway, (2) on preparation of the Geometric Approval Drawings for Campus Parkway, and (3) each October, beginning in the opening year of the UC Merced campus. If any of these analyses determine that the Lake/Yosemite intersection will operate at unacceptable LOS, the University will contribute its fair share (as described in Section 4.14.3.2) toward the cost of any of the following improvements deemed necessary at the intersection: installation of a traffic signal, or construction of a left-turn pocket on the Yosemite Avenue approach to Lake Road. Monitoring of the Lake/Yosemite intersection will end upon completion of the Campus Parkway extension from Yosemite Avenue to Bellevue Road; monitoring of other approach routes to campus will continue as described in Mitigation Measure 4.14-5. (Applicability—~~Program~~ project level).*

In response to comments O13-3 and O13-26, the following changes have been made to Mitigation Measure 4.14-3(a) on page 4.14-33:

4.14-3(a) *The University will create a visual record of pavement surface condition along Bellevue Road (from Lake to Highway 59), and Lake Road (from the University entrance to Yosemite Avenue), and any other routes on which final haul plans indicate large truck traffic generated by campus construction would exceed 5 percent of existing traffic levels. The University will re-inventory pavement condition along these routes within two months following completion of Phase 1 construction, and either restore pavement to pre-construction condition or reimburse ~~County~~ the responsible jurisdiction to perform restoration (less a reasonable allowance for deterioration caused by other traffic). (Applicability—project level).*

The following changes have been made to Mitigation Measure 4.14-3(b) on page 4.14-33 to correct a typographical error and to clarify the subject intersection:

4.14-3(b) *The University will either: (1) if deemed necessary by County Public Works Department, restrict truck routing to/from the site to prohibit large trailer-trucks from travel via Lake Road, ~~and~~ or (2) pay the County to design and construct improvements to the intersection of Lake Road and Yosemite Avenue to accommodate the turn-radius of the largest permitted construction vehicle (Applicability—project level).*

In response to comment O13-23b, the following change has been made to Mitigation Measure 4.14-4(a) on page 4.14-3:

4.14-4(a) *The University will contribute its fair share (as described in Section 4.14.3.2) toward the following RTP Tier 2 roadway improvements:*

Campus Parkway, extend from Yosemite Avenue to Bellevue Road

Highway 59, widen to 4 lanes, ~~Yosemite~~ Olive Avenue to Bellevue Road

Highway 59, new segment between Highways 99 and 140

Yosemite Avenue, extend from R Street to Highway 59

Yosemite Avenue, widen to 4 lanes, Campus Parkway to G Street

Bellevue Road, widen to 6 lanes, Highway 59 to Campus Parkway

R Street, extend from Yosemite Avenue to Bellevue Road

Parsons Avenue/Gardner Avenue, extend and widen to 4 lanes, Childs Avenue to Bellevue Road

Santa Fe Drive, widen to 6 lanes, Buhach Road to Highway 59

Intersection improvements along G Street between Highway 99 and Childs Avenue (Applicability—program level).

In response to comment O13-15 and to correct a typographical error, the following changes have been made to the paragraph after Impact 4.14-6 on page 4.14-39:

Along existing high-speed rural roads such as Bellevue Road, Lake Road, Highway 59, and portions of Yosemite Avenue, McKee Road, and G Street, annual monitoring of traffic conditions should be undertaken to assess the precise timing of required capacity and safety improvements. Monitoring would include traffic counts, speed measurements, intersection and driveway delay measurements, and accident data reviews. The ~~monitoring report resultant study~~ should be used, in conjunction with campus enrollment forecasts (and University Community building permit projections, if applicable) to determine whether remedial capacity and/or safety upgrades will be needed within the next one to three years, supported by a certified engineer's recommendation. The ~~report engineering study~~ should also contain a cost/benefit analysis of whether interim improvement measures (such as turn lanes, acceleration/deceleration lanes, shoulder widening, median refuges, stop or yield signs, traffic calming, or increased traffic enforcement) would be advantageous compared with constructing the parallel or co-aligned RTP facility. The engineer's report and recommendations should be used to determine whether to move expeditiously to correct any deficiencies on an interim basis, or move to final design and construction of the ultimate RTP facility (or initial phases of that facility). Monitoring of McKee Road would continue until completion of the Campus Parkway from Highway 99 to Yosemite Avenue. Monitoring of Lake Road would continue until completion of the extension of Campus Parkway from Yosemite Avenue to Bellevue Road. Monitoring of other campus access routes would continue until completion of the Tier 1 improvement or the project mitigation measure (as listed in 4.14-34(a)) that represents the final configuration of that road.

In response to comments LA9-1, O13-5, and O13-7, the following changes have been made to Mitigation Measure 4.14-6 on page 4.14-39:

4.14-6 *The University will contribute its fair share (as described in Section 4.14.3.2) toward the annual monitoring of traffic conditions along major approach routes to the campus, ~~and the~~ ~~and will contribute its fair share toward~~ implementation of interim improvements, if warranted. Improvements to be considered at the intersection of Bellevue Road and G Street will include installation of a traffic signal and construction of a left-turn pocket on the westbound Bellevue Road approach. (Applicability—program level).*

Based on comments and internal review, Table 4.14-11 on page 4.14-43 of the Draft EIR has been revised as follows: in the Highway 59 segment for Yosemite Avenue to Olive Avenue, the level of service with Campus plus Community is D.

In response to comment O13-23b, the following change has been made to Mitigation Measure 4.14-10(a) on page 4.14-44:

4.14-10(a) The University will contribute its fair share (as described in Section 4.14.3.2) toward the following RTP Tier 2 roadway improvements:

Highway 59, widen to 4 lanes, Yosemite Olive Avenue to Bellevue Road

Highway 59, new segment between Highways 99 and 140

Yosemite Avenue, extend from R Street to Highway 59

Yosemite Avenue, widen to 4 lanes, Campus Parkway to G Street

Bellevue Road, widen to 6 lanes, Highway 59 to Campus Parkway

R Street, extend from Yosemite Avenue to Bellevue Road

Parsons Avenue/Gardner Avenue, extend and widen to 4 lanes, Childs Avenue to Bellevue Road

Highway 59, new alignment along Mission Avenue

Mission Avenue, widen to 4 lanes, Highway 99 to Highway 59

*Childs Avenue, widen to 4 lanes, Campus Parkway to Highway 59
(Applicability-program level).*

In response to comment O13-32 regarding the Draft EIR, the Table 4.14-13 on page 4.14-46 has been modified. The revised table appears on the next page.

7.1.M Utilities

The following changes and corrections to Section 4.15 “Utilities” of the Draft EIR are the result of internal review and comments received on the Draft EIR.

Per comment LA9-19, the fourth paragraph on page 4.15-6 has been modified as follows:

Solid waste is collected by the City of Merced within the city limits, and by franchise hauling companies throughout the unincorporated areas of Merced County. The City and these companies also pick up some recyclable materials for a fee. The City picks up cardboard from businesses for a reduced fee. There is no sorting or recycling plant in Merced County, but some recyclable material is accepted at the landfills, which is then taken to a recycling plant in Turlock. The County ~~is in the process of developing a proposal for mandatory yard debris collection.~~ has implemented a curbside green waste collection program.

Per comment LA5-20, the second paragraph on page 4.15-7 has been modified as follows:

The campus site is part of the California Independent System Operator’s Fresno local area. Currently, PG&E provides electricity to the City of Merced. It has not yet been determined which utility company would provide power to the campus; both PG&E and Merced Irrigation District (MID) are potential providers. The site is within PG&E’s Wilson 115-kilovolt (kV) subarea. A 230-kV Belotta-Herndon line originates at the Wilson Substation south of Childs Avenue and terminates northwest of Bellevue Road and Highway 59. This is the closest line to the proposed site. ~~MID power lines are located near Highway 99.~~ MID Electric operates a 21-kV line running west to east at the intersection of Yosemite Avenue and Lake Road. MID transmission level lines are adjacent to Santa Fe Avenue and Highway 99 in the Merced area.

Table 4.14-13
Comparison of RTP Funding Categories for Major Improvement Projects
Included in EIR Analysis

Improvement Project	1998 RTP	2001 RTP
<i>Included in Future Baseline Network</i>		
Campus Parkway, 99 to Yosemite	Tier 1	Funded
New interchange at Mission	Tier 1	Funded
Highway 59, 4 lanes, 16 th to Olive	Tier 1	Tier 1
Highway 59, interchange at Thornton and expressway from 99 to Belcher	Tier 1	Tier 1 (99 to Bellevue + new interchange)
Highway 140, 4 lanes, Parsons to Kibby	Tier 1	Tier 1 (Parsons to Santa Fe) & Tier 2 (Santa Fe to Parkway)
Improve 99/140 interchange	Tier 1	Other Funding (SHOPP)
Improve 99 interchanges at V and R	Tier 1	Under construction
Upgrade 99, Merced to Madera County	Tier 1	Funded
<i>Cumulative Mitigation Measures</i>		
Highway 59, widen to 4 lanes, Yosemite to Bellevue	Tier 2	Tier 2 (Olive to Yosemite or Bellevue)
Highway 59, new segment, 99 to 140	Tier 2	Tier 2
Highway 59, new alignment along Mission	Tier 2	Tier 2
Yosemite Ave. extension, R Street to 59	Tier 2	Other Funding (Devmt/Local)
Yosemite Ave., widen to 4 lanes, Parkway to G	Tier 2	Tier 2
Bellevue Rd., widen to 6 lanes, 59 to Parkway	Tier 2	Tier 2
R Street extension, Yosemite to Bellevue	Tier 2	Other Funding (Devmt/Local)
Parsons/Gardner extension, Childs to Bellevue	Tier 2	Other Funding (Devmt/Local)
Mission Ave., widen to 4 lanes <u>improvement</u> , 59 to 99	Tier 2 (“ <u>widen to four lanes</u> ”)	Tier 1 (“ <u>improvement</u> ”)
Childs Ave., widen to 4 lanes, Parkway to 59	Tier 2	Not included

Per comment FA1-31, the last paragraph under Impact 4.15-1 on page 4.15-8 has been modified as follows:

The proposed campus would require ~~4,430~~ 1,310 afy of water for irrigation of turf grass and other landscaping, as shown in Table 4.15-2.

Per comment LA6-17, the second paragraph under Impact 4.15-1 on page 4.15-11 has been modified as follows:

The City of Merced would provide potable water to the campus. Water wells would be constructed by the City on the campus site and a water distribution system would be developed and built on the site. ~~The campus would be connected to the City's water distribution system via a 16-inch line that would be built along Lake Road and Yosemite Avenue. Details concerning the location and engineering of where the campus would be connected to the City's water distribution system would be addressed in the services agreement and/or preannexation agreement between the City and the University. One potential connection is via a 16-inch line along Lake Road and Yosemite Avenue.~~ This connection would provide backup water if there is an interruption in the on-site supply. Water would also be needed for fire protection services, and water storage tanks would be built on campus to accommodate fire flow requirements.

Per comment LA6-18, the third paragraph after Impact 4.15-2 on page 4.15-12 has been modified as follows:

The construction of a wastewater line connection to the City's wastewater conveyance system would not result in impacts to environmental resources, because the line would be installed within the shoulder of ~~Lake Road, Bellevue Road, and G Street, consistent with the City's practice of placing~~ The City normally places utility lines within roadway shoulders or under the pavement. Details concerning the location and engineering of the connection point would be addressed in the services agreement and/or preannexation agreement between the City and the University. The environmental impacts of all off-site improvements are discussed in other sections of this EIR. Therefore, the impact related to the provision of wastewater service to the proposed campus is considered *less than significant*.

7.2 CHANGES TO VOLUME 2 OF THE DRAFT EIR

7.2.A Summary

The following change to the Summary section of the Draft EIR is the result of internal review.

In Table S-1 on page S-9, the designation for Level of Significance Prior to Mitigation for Impact 3.9-1 is "PS." The revised Table S-1 is included in this Final EIR as Table 6-2.

7.2.B Environmental Setting, Impacts, and Mitigation

In response to comments FA1-17 and FA1-35, in addition to Mitigation Measure 4.4-10(a)-(b) in the Draft EIR, the University will develop and implement project-specific Mitigation Measure 3.4-8, which will consist of a Phase 1 Construction Mitigation Plan to further assure that Phase 1 construction will not result in significant impacts to biological resources. The following measures will be included in the Phase 1 Construction Mitigation Plan, and the text of Volume 2 of the Draft EIR has been changed as follows:

Preconstruction Surveys. *The University will implement preconstruction surveys in habitats suitable for listed species within and adjacent to construction areas. These surveys are intended to augment previous surveys and will follow established protocols. Results of preconstruction surveys will be incorporated into the Phase 1 Construction Mitigation Plan.*

Monitoring and Reporting. *The University will designate environmental monitors who will be responsible for implementing construction mitigation measures and reporting the status of contractors' compliance with mitigation requirements. The monitors will report directly to the University Environmental Manager. Monitoring reports will be filed with the Environmental Manager according to schedules determined based on potential for threats to listed species and other environmental resources as established in the Phase 1 Construction Mitigation Plan.*

Incorporation of Species Protection Obligations into Contracts. *All contracts between the University and contractors, between construction management firms, and subcontractors will include restrictions on disturbance of listed species and habitats. Specific penalties for violations will be specified, including warnings, removal of individual violators from the project, termination of contracts and payment of damages.*

Training Program. *Prior to initiating Phase 1 construction, all construction personnel will receive training described in the Phase 1 Construction Mitigation Plan. The purpose of the training program is to educate construction personnel of the sensitive nature of the areas adjacent to the Campus and their obligations to protect sensitive resources.*

Incorporation of BMPs. *Standard construction BMPs will be identified in the Phase 1 Construction Mitigation Plan, incorporated into construction designs and plans and specifications, and required of contractors during construction.*

Construction Fencing. *Prior to construction, temporary fencing will be installed along the boundaries of the portion within the Phase 1 area under construction to prevent construction vehicles from straying beyond the Phase 1 boundary.*

Kit Fox Preconstruction Surveys. *Kit fox preconstruction surveys will be included in the Phase 1 Construction Mitigation Plan and implemented in accordance with Mitigation Measure 4.4-6 and in the context of overall kit fox preconstruction survey guidelines that also require spotlighting and photo stations. If the species is not found during these surveys and examination of dens does not show evidence of use, dens will be eliminated.*

Invasive Species Control. *To ensure that seeds from invasive species are not transported into the Phase 1 area by construction equipment, the Phase 1 Construction Mitigation Plan will require that all equipment be washed at designated wash stations to ensure that they are clean and generally free of seeds before entering the Campus.*