Draft Tiered Initial Study

The following Initial Study has been prepared in compliance with CEQA.

Prepared By:

OFFICE OF RESOURCE MANAGEMENT AND PLANNING

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1 PROJECT INFORMATION

Project title:

Veterinary Medicine 3B

Project location:

University of California, Davis
Yolo County

Lead agency's name and address:

Office of Resource Management and Planning
University of California
One Shields Avenue
376 Mrak Hall
Davis, CA 95616-8678

Contact person:

A. Sidney England, Director of Environmental Planning, 530-752-2432

Project sponsor's name and address:

See lead agency.

Location of administrative record:

See lead agency.

Identification of previous documents relied upon for tiering purposes:

This environmental analysis is tiered from the Environmental Impact Report (EIR) for the UC Davis 2003 Long Range Development Plan (2003 LRDP) (State Clearinghouse No. 2002102092). The 2003 LRDP is a comprehensive land use plan that guides physical development on campus to accommodate projected enrollment increases and expanded and new program initiatives through the 2015-16 academic year. Section 2.2 provides additional information about the tiering process. The 2003 LRDP and its EIR are available for review at the following locations:

- UC Davis Office of Resource Management and Planning in 376 Mrak Hall on the UC Davis campus
- Reserves at Shields Library on the UC Davis campus
- Reserves at Carlson Health Sciences Library on the UC Davis campus
- Yolo County Public Library at 315 East 14th Street in Davis
- Online at http://www.ormp.ucdavis.edu/environreview/
2 INTRODUCTION

2.1 INITIAL STUDY

Pursuant to Section 15063 of the California Environmental Quality Act (CEQA) Guidelines (Title 14, California Code of Regulations, Sections 15000 et seq.), an Initial Study is a preliminary environmental analysis that is used by the lead agency as a basis for determining whether an EIR, a Mitigated Negative Declaration, or a Negative Declaration is required for a project. The CEQA Guidelines require that an Initial Study contain a project description, description of environmental setting, identification of environmental effects by checklist or other similar form, explanation of environmental effects, discussion of mitigation for significant environmental effects, evaluation of the project’s consistency with existing, applicable land use controls, and the name of persons who prepared the study.

2.2 TIERING PROCESS

This environmental analysis is a Tiered Initial Study for the proposed Veterinary Medicine 3B (referred to as the “proposed project” throughout this document). This environmental analysis is tiered from the UC Davis 2003 LRDP EIR in accordance with Sections 15152 and 15168 of the CEQA Guidelines and Public Resources Code Section 21094. The 2003 LRDP EIR is a Program EIR that was prepared pursuant to Section 15168 of the CEQA Guidelines. The 2003 LRDP is a comprehensive land use plan that guides physical development on campus to accommodate projected enrollment increases and expanded and new program initiatives through the 2015-16 academic year. The 2003 LRDP EIR analyzes full implementation of uses and physical development proposed under the 2003 LRDP, and it identifies measures to mitigate the significant adverse program-level and cumulative impacts associated with that growth. The proposed project is an element of the growth that was anticipated in the 2003 LRDP and evaluated in the 2003 LRDP EIR.

The CEQA concept of "tiering" refers to the evaluation of general environmental matters in a broad program-level EIR, with subsequent focused environmental documents for individual projects that implement the program. This environmental document incorporates by reference the discussions in the 2003 LRDP EIR (the Program EIR) and concentrates on project-specific issues. CEQA and the CEQA Guidelines encourage the use of tiered environmental documents to reduce delays and excessive paperwork in the environmental review process. This is accomplished in tiered documents by eliminating repetitive analyses of issues that were adequately addressed in the Program EIR and by incorporating those analyses by reference.

Section 15168(d) of the State CEQA Guidelines provides for simplifying the preparation of environmental documents on individual parts of the program by incorporating by reference analyses and discussions that apply to the program as a whole. Where an EIR has been prepared or certified for a program or plan, the environmental review for a later activity consistent with the program or plan should be limited to effects that were not analyzed as significant in the prior EIR or that are susceptible to substantial reduction or avoidance (CEQA Guidelines Section 15152[d]).

Accordingly, the tiering of the environmental analysis for the proposed project allows this Tiered Initial Study to rely on the 2003 LRDP EIR for the following:

- a discussion of general background and setting information for environmental topic areas;
- overall growth-related issues;
• issues that were evaluated in sufficient detail in the 2003 LRDP EIR for which there is no significant new information or change in circumstances that would require further analysis; and

• assessment of cumulative impacts.

The purpose of this Tiered Initial Study is to evaluate the potential environmental impacts of the proposed project with respect to the 2003 LRDP EIR to determine what level of additional environmental review, if any, is appropriate. As shown in the Determination in Section 6 of this document, and based on the analysis contained in this Tiered Initial Study, it has been determined that the proposed project may have potentially significant effects on the environment that were not previously addressed or adequately addressed in the 2003 LRDP EIR.

This Initial Study concludes that many potentially significant project impacts are addressed by the measures that have been adopted as part of the approval of the 2003 LRDP. Therefore, those 2003 LRDP EIR mitigation measures that are related to, and may reduce the impacts of, this project will be identified in this Initial Study. Since these mitigation measures are already being carried out as part of implementation of the 2003 LRDP, they will not be readopted. The benefits of these mitigation measures will be achieved independently of considering them as specific mitigation measures of this project. Nothing in this Initial Study in any way alters the obligations of the campus to implement the LRDP mitigation measures.

This Tiered Initial Study includes only minor technical changes or additions to the analysis set forth in the 2003 LRDP EIR, and it does not raise important new issues about the significant effects on the environment analyzed in the 2003 LRDP EIR. None of the conditions described in CEQA or the CEQA Guidelines calling for preparation of a subsequent or supplemental EIR have occurred.

2.3 Scope of the Focused Tiered EIR

Based on the analysis in the Initial Study, it has been determined that the proposed project would not result in any potentially significant impacts that were not sufficiently addressed and mitigated to the extent feasible by the 2003 LRDP EIR. Therefore, this Tiered Analysis provides adequate environmental review of the project, and a Negative Declaration could be prepared.

For this project, the campus has opted to prepare a Focused Tiered EIR in lieu of a negative declaration. The focused Tiered EIR will revisit potential impacts of the project that were found to be significant and unavoidable at the project level. The Focused Tiered EIR will therefore evaluate the potential impacts of the project in the following resource areas:

Air Quality, specifically, impacts from daily operational and construction emissions that would exceed Yolo-Solano Air Management District thresholds.

Cultural Resources, specifically, substantial adverse change in the significance of a unique archaeological resource, as defined in CEQA guidelines 15064.5, where the values that contribute to the significance of the resources could not be preserved through documentation and data recovery.

Hydrology, specifically, impacts to the deep and shallow/intermediate aquifers from increased water extraction and increased areas of impervious surfaces.

Even though CEQA’s tiering provisions would authorize a negative declaration to be prepared in this instance because the LRDP EIR contains an adequate project-level analysis for these impacts, the campus has elected to prepare a Focused Tiered EIR to confirm the LRDP EIR’s findings.
Because the campus has elected to prepare a Focused Tiered EIR, alternatives to the proposed project will be analyzed. The range of alternatives will include the No Project-No Build alternative, No Project-Renovations Only alternative, Off-Campus Leased Space alternative, and Reduced Facilities alternative.

The scope of the EIR may be revised following receipt and review of comments received on the Notice of Preparation and this Initial Study.

2.4 Public and Agency Review

This Draft Tiered Initial Study will be circulated for public and agency review from March 23, 2007 to April 23, 2007. Copies of this document, the 2003 LRDP, and the 2003 LRDP EIR are available for review at the following locations:

- UC Davis Office of Resource Management and Planning in 376 Mrak Hall on the UC Davis campus
- Reserves at Shields Library on the UC Davis campus
- Reserves at Carlson Health Sciences Library on the UC Davis campus
- Yolo County Public Library at 315 East 14th Street in Davis
- Online at http://www.ormp.ucdavis.edu/environreview/

Comments on this Draft Tiered Initial Study must be received by 5:00 PM on April 23, 2007 and can be e-mailed to environreview@ucdavis.edu or sent to:

John A. Meyer  
Vice Chancellor - Resource Management and Planning  
University of California  
One Shields Avenue  
376 Mrak Hall  
Davis, CA 95616

2.5 Project Approvals

As a public agency principally responsible for approving or carrying out the proposed project, the University of California is the Lead Agency under CEQA and is responsible for reviewing and certifying the adequacy of the environmental document and approving the proposed project. It is anticipated that The Board of Regents of the University of California (The Regents) will consider approval of the proposed project in July 2007.

2.6 Organization of the Tiered Initial Study

This Tiered Initial Study is organized into the following sections:

Section 1 – Project Information: provides summary background information about the proposed project, including project location, lead agency, and contact information.
Section 2 – Introduction: summarizes the Tiered Initial Study's relationship to the 2003 LRDP EIR, the scope of the document, the project's review and approval processes, and the document's organization.

Section 3 – Project Description: includes a description of the proposed project, including the need for the project, the project's objectives, and the elements included in the project.

Section 4 – Consistency with the 2003 LRDP: describes the consistency of the proposed project with the 2003 LRDP and 2003 LRDP EIR.

Section 5 – Environmental Factors Potentially Affected: identifies which environmental factors, if any, involve at least one significant or potentially significant impact that has not been previously addressed in the 2003 LRDP EIR and cannot be reduced to a less-than-significant level.

Section 6 – Determination: indicates whether impacts associated with the proposed project are significant, and what, if any, additional environmental documentation is required.

Section 7 – Evaluation of Environmental Impacts: contains the Tiered Environmental Checklist form for each resource area. The checklist is used to assist in evaluating the potential environmental impacts of the proposed project with respect to the 2003 LRDP EIR. This section also presents a background summary for each resource area, the standards of significance, relevant impacts and mitigation measures from the 2003 LRDP EIR, and an explanation of all checklist answers.

Section 8 – Fish and Game Determination: indicates if the project has a potential to impact wildlife or habitat and if an associated Fish and Game filing fee would be paid.

Section 9 – References: lists references used in the preparation of this document.

Section 10 – Agencies and Persons Consulted: provides the names of individuals contacted in preparation of this document.

Section 11 – Report Preparers: lists the names of individuals involved in the preparation of this document.
3 PROJECT DESCRIPTION

3.1 REGIONAL LOCATION

The approximately 5,300 acre UC Davis campus is located in Yolo and Solano Counties approximately 72 miles northeast of San Francisco, 15 miles west of the City of Sacramento, and adjacent to the City of Davis (see Figure 3.1). The campus is comprised of four campus units: the central campus, the south campus, the west campus, and Russell Ranch. Most academic and extracurricular activities occur within the central campus. The central campus is bounded generally by Russell Boulevard to the north, State Route 113 (SR 113) to the west, Interstate 80 (I-80) and the Union Pacific Railroad tracks to the south, and A Street to the east. The south campus is located south of I-80 and north of the South Fork of Putah Creek. The west campus is bounded by SR 113 to the east, Putah Creek to the south, Russell Boulevard to the north, and extends approximately one-half mile west of County Road 98. The south and west campus units are contiguous with the central campus, and are used primarily for field teaching and research. The approximately 1,600 acre Russell Ranch portion of the campus lies to the west, separated from the west campus by approximately one and one-half miles of privately owned agricultural land. Russell Ranch was purchased in 1990 for campus uses including large-scale agricultural and environmental research, study of sustainable agricultural practices, and habitat mitigation. Russell Ranch is bordered roughly by County Road 96 on the east, Putah Creek on the south, Covell Boulevard on the north, and Russell Boulevard and privately owned agricultural land on the west and northwest.

3.2 PROJECT OVERVIEW

UC Davis proposes to construct and operate the Veterinary Medicine 3B project, in the Health Sciences District of the central campus, adjacent to Parking Lot 50 and the Veterinary Medicine Teaching Hospital, west of Garrod Drive, and south of Hutchison Drive. The project would consist of an approximately 124,700 gross square feet (gsf) (76,100 assignable square feet (asf)) four-story building encompassing: offices and workspace (28,100 asf); research laboratories (27,000 asf) and laboratory support space (17,500 asf), which includes 495 asf of biosafety level 3 laboratory space; rodent vivarium space (1,500 asf); and centralized research support space (2,000 asf), which could be used as future rodent vivarium expansion space.

The proposed project would not increase the campus population, and would relocate existing members of the campus population from Surge 3 and Haring Hall in the core of campus to the Health Sciences District. The vacated core campus space would be released to address demand for general academic space in the core campus, and the existing Surge 3 and Haring Hall buildings would be renovated as necessary; such renovations would be analyzed separately. The proposed project would accomplish four key objectives for the Davis campus: to provide modern laboratory space to support biomedical research programs in the School of Veterinary Medicine (SVM); to consolidate SVM teaching, research, and clinical programs in the Health Sciences District of the Davis campus; to release space in the core of campus to accommodate general campus enrollment growth that has already occurred on the Davis campus; and to complete the facilities plan submitted to the American Veterinary Medical Association.

The project would be designed in such a manner as to allow for a possible realignment of Garrod Drive approximately 250 feet north of the current alignment, and to allow for a possible bike undercrossing at a realigned Garrod Drive. The realignment and bike undercrossing are being considered part of the project, but funding for these elements has not been finalized, therefore the realignment and undercrossing could be implemented concurrent with the proposed building or be implemented at a later date. The project would install a new segment of steam line in order to complete a steam utility loop in the Health Sciences District, and the project would make chilled
water, steam, electrical, natural gas, telecommunications, domestic and utility water, sanitary sewer
and storm drain connections.

Construction is anticipated to start in fall 2008 and last approximately two years. The construction
timing for the realignment of Garrod Drive is uncertain and depends upon funding.
Figure 3.3
Project Site Plan
Veterinary Medicine 3B
3.3 **PROJECT SITE**

The proposed project site is north of Parking Lot 50 and the Veterinary Medicine Teaching Hospital, east of the Veterinary Medicine Instructional Facility, south of the Carlson Medical Sciences Library and the Schaal Aquatic Center, and west of Garrod Drive (see Figure 3.2). The site is currently an unused, open field, with a temporary road to Parking Lot 56 running north-south through the site. The 2003 LRDP designates the proposed site for an *Academic/Administrative High Density* land use.

3.4 **PROJECT NEED AND OBJECTIVES**

The proposed project would accomplish the following goals for the Davis campus:

- Provide modern laboratory space to support biomedical research programs in the SVM, sufficient to house up to 53 of the existing student-faculty research teams (approximately 80% of the SVM basic-science ladder-rank faculty)

The proposed project would replace existing research laboratories, lab support and office space in Haring Hall and the Surge 3 building. Haring Hall and Surge 3 currently house research programs in laboratory configurations that are rigid, inefficient and inadequate for contemporary teaching and research work. The project would provide modern, efficient laboratories in an “open” floor plan configuration.

Ladder-rank faculty members in the Anatomy, Physiology and Cell Biology; Veterinary Molecular Biosciences; and Pathology, Microbiology and Immunology departments; and from Veterinary Medicine Extension would all be located in the proposed project facility. These faculty members would move their research programs to the new facility. Their research entails investigations into cellular and molecular biology, including research on such topics as responses of cell populations and organisms to environmental quality and homeostatic challenge; the perturbations of fundamental biological processes by mutation, nutrition, drugs and xenobiotics; the pathobiological mechanisms of diseases of multifactorial origin; and understanding causes and mechanisms of disease in animals at a range of biological levels from organismal to cellular and molecular to genetic.

- Consolidate SVM teaching, research, and clinical programs in the Health Sciences District

The project would consolidate all School of Veterinary Medicine (SVM) programs in the Health Sciences District, which would avoid operational inefficiencies and isolation of SVM students and faculty.

- Release space in the core of campus to accommodate general campus enrollment growth that has already occurred on the Davis campus

Additionally, consolidation in turn addresses the needs of general campus programs for space in the core academic area. With completion of the proposed project, Haring Hall and Surge 3 would then be released to become academic office and dry-laboratory space to accommodate general campus enrollment growth that has already occurred on the Davis campus during the past several years. Haring Hall and Surge 3 may be renovated to meet these needs; such renovations would be analyzed separately as they are currently unscheduled and only partially funded.

- Complete the facilities plan submitted to the American Veterinary Medical Association (AVMA)

The AVMA is the accrediting body for veterinary education programs in the United States. The AVMA had placed the SVM on limited accreditation status because existing teaching and research
facilities did not meet AVMA minimum standards. Full accreditation was restored in March 2005, following an AVMA site visit of the Veterinary Medicine Instructional Facility and Veterinary Medicine 3A projects, which were under construction. Construction of the proposed project would further support campus efforts in reinforcing the quality of SVM research programs and meeting the facilities plan, as submitted to the AVMA.

3.5 **PROJECT ELEMENTS**

3.5.1 **Buildings**

The proposed project would construct an approximately 124,700 gross square foot (gsf)\(^1\) (approximately 76,100 assignable square feet (asf)), four-story, two-wing building, with a loading dock on the south side and exterior plazas on the north and south sides of the building (see Figure 3.3). The building would include: offices and workspace (28,100 asf); research laboratories (27,000 asf) and laboratory support space (17,500 asf), which includes 495 asf of biosafety level 3 laboratory space; rodent vivarium space (1,500 asf); and centralized research support space (2,000 asf), which could be used as future rodent vivarium expansion space.

To meet anticipated research requirements, a portion of the proposed project laboratory space would be constructed and furnished to conform with the requirements for BSL 3 as defined in the Centers for Disease Control and Prevention (CDC) publication *Biosafety in Biomedical and Biological Laboratories*. This publication defines four biosafety levels that apply to biohazardous materials operations, depending on the risk posed by the organism involved in the research. One of the four biosafety levels would be applicable to the proposed project and is discussed below. Although these biosafety levels were originally intended to protect human health, the CDC Guidelines are widely used to prevent release of animal or human pathogens from laboratories. BSL 3 is appropriate for use with agents that can be contracted by the respiratory route and may cause serious or lethal diseases in humans or animals, or cause moderate economic loss to animal industries. The appropriate controls for a particular laboratory depend not only on the organism being used in the laboratory but also the quantities and concentrations of organisms that will be involved and the hazards associated with proposed use. For example, propagation of infectious agents for vaccine production involves large quantities of organisms in high concentrations. In contrast, as with the proposed project, clinical specimens generally contain very small quantities of infectious agents.

The anticipated use of the BSL3 space in the proposed facility would involve mainly cell and virus culture, in very small quantities.

**BSL 3 Laboratory Space Requirements**

The proposed project would comply with the following requirements, which apply to BSL 3 facilities:

- The laboratory must be separated from areas that are open to unrestricted traffic flow within the building, and access to the laboratory must be restricted. Passage through a series of two self closing doors is the basic requirement for entry into the laboratory from access corridors. Doors must be lockable. A clothes change room may be included in the passageway.

- The interior surfaces of walls, floors, and ceilings of areas where BSL 3 agents are handled must be constructed for easy cleaning and decontamination. Seams, if present, must be sealed. Walls, ceilings, and floors should be smooth, impermeable to liquids and resistant to the chemicals and disinfectants normally used in the laboratory. Floors should be monolithic and

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\(^1\) Gross square footage (gsf) is defined as the total floor or surface areas of a building. Assignable square footage (asf) is defined as the total floor or surface areas of rooms that are assigned or available for assignment to a campus occupant or specific use, including every type of space functionally usable by an occupant. Excluded from assignable square footage are areas such as restrooms, lobbies, hallways, mechanical rooms, and service spaces.
slip resistant. Consideration should be given to the use of coved floor coverings. Penetrations in floors, walls, and ceiling surfaces must be sealed. Openings such as those around ducts and the spaces between doors and frames must be capable of being sealed to facilitate decontamination.

- Laboratory furniture must be capable of supporting anticipated loading and uses. Spaces between benches, cabinets, and equipment must be accessible for cleaning. Chairs and other furniture used in laboratory work should be covered with a non-fabric material that can be easily decontaminated. Bench tops must be impervious to water and resistant to moderate heat and the organic solvents, acids, alkalis, and those chemicals used to decontaminate the work surfaces and equipment.

- All windows in the laboratory must be closed and sealed.

- A method for decontaminating all laboratory wastes must be available in the facility and utilized, preferably within the laboratory (i.e., autoclave, chemical disinfection, incineration, or other approved decontamination method). Consideration should be given to means of decontaminating equipment. If waste is transported out of the laboratory, it should be properly sealed and not transported in public corridors.

- A ducted exhaust air ventilation system must be provided. This system creates directional airflow which draws air into the laboratory from "clean" areas and toward "contaminated" areas. The exhaust air must not be recirculated to any other area of the building. Filtration and other treatments of the exhaust air are not required, but may be considered based on site requirements, and specific agent manipulations and use conditions. The outside exhaust must be dispersed away from occupied areas and air intakes, or the exhaust must be HEPA-filtered. Laboratory personnel must verify that the direction of the airflow (into the laboratory) is proper. It is recommended that a visual monitoring device that indicates and confirms directional inward airflow be provided at the laboratory entry. Consideration should be given to installing an HVAC control system to prevent sustained positive pressurization of the laboratory. Audible alarms should be considered to notify personnel of HVAC system failure.

- HEPA-filtered exhaust air from a Class II biological safety cabinet can be recirculated into the laboratory if the cabinet is tested and certified at least annually. When exhaust air from Class II safety cabinets is to be discharged to the outside through the building exhaust air system, the cabinets must be connected in a manner that avoids any interference with the air balance of the cabinets or the building exhaust system (e.g., an air gap between the cabinet exhaust and the exhaust duct). When Class III biological safety cabinets are used they should be directly connected to the exhaust system. If the Class III cabinets are connected to the supply system, it must be done in a manner that prevents positive pressurization of the cabinets. Biological safety cabinets are required and must be located away from doors, from room supply louvers, and from heavily-traveled laboratory areas.

- Continuous flow centrifuges or other equipment that may produce aerosols must be contained in devices that exhaust air through HEPA filters before discharge into the laboratory. These HEPA systems must be tested at least annually. Alternatively, the exhaust from such equipment may be vented to the outside if it is dispersed away from occupied areas and air intakes.

- Vacuum lines must be protected with liquid disinfectant traps and HEPA filters, or their equivalent. Filters must be replaced as needed. An alternative is to use portable vacuum pumps (also properly protected with traps and filters).

- An eyewash station must be readily available inside the laboratory. Each laboratory room must contain a sink for hand washing. The sink must be hands-free or automatically operated and located near the room exit door.
• Illumination must be adequate for all activities, avoiding reflections and glare that could impede vision.

• The BSL 3 facility design and operational procedures must be documented. The facility must be tested for verification that the design and operational parameters have been met prior to operation. Facilities should be re-verified, at least annually, against these procedures as modified by operational experience.

To meet these requirements, the proposed BSL 3 laboratory would be physically separated from the exterior and from other areas of the building. The laboratories would be provided with a ducted exhaust air ventilation system that would draw air from “clean” areas into the laboratory and the exhaust from the laboratory would be HEPA-filtered to prevent release of infectious organisms into the environment. Exhaust and supply air systems would be interlocked so that both systems will shut down in the event of power interruption. Backup power would be supplied for all critical electrical systems. Laboratory procedures that could generate aerosols containing infectious organisms would be performed in biosafety cabinets, which would contain any aerosols produced and would include HEPA filters for exhaust air. All laboratory waste, including specimens, would be decontaminated by treatment in an autoclave before being removed from the BSL 3 area. To prevent infectious organisms from traveling out of the laboratory into the environment on workers’ clothing, workers would change into protective clothing before entering the laboratory and would remove protective clothing in the de-gowning room before entering the changing room. Used protective clothing would be decontaminated in an autoclave before disposal or laundering for re-use. The floors, ceilings, and wall surfaces would be constructed for easy cleaning and decontamination and the benchtops would be impervious to water and resistant to heat and chemicals. In addition, all penetrations through floor coverings and wall surfaces would be sealed. Floor coverings would be coved at walls and cabinets.

The project would comply with applicable elements of the UC Davis Biosafety Program. The UC Davis Office of Environmental Health and Safety (EH&S) Biosafety Officer will review the project plans during project design to ensure that the BSL 3 laboratory conforms to the requirements for BSL 3 as outlined in the CDC standards. The EH&S Biosafety Officer also will review the project for conformance with sections of the campus design guidelines pertaining to laboratories, including biosafety cabinet specifications. The EH&S Biosafety Officer would inspect the facility during construction and would be responsible for certifying that the laboratory is consistent with the CDC standards and that it is suitable for use.

In compliance with UC Davis policy, the research program would obtain a Biological Use Authorization (BUA) for the work that would be performed using infectious organisms, subject to approval by the Biological Safety Administrative Advisory Committee (BSAAC). Consistent with the UC Davis Biosafety Program, the laboratory would be inspected annually by the EH&S Biosafety Officer to verify compliance with all policies and procedures outlined in the UC Davis Biosafety Manual and with all applicable federal and state standards and requirements. The biosafety cabinets would also be tested and certified on an annual basis. Following UC Davis policy, appropriate training would be required for all employees working in the laboratory.

The centralized research support space could be used for the Veterinary Medicine Storehouse, which is currently located in Haring Hall, and which would be relocated to the proposed project facility. The Storehouse sells laboratory and general office supplies, such as test tubes and paper, to support SVM faculty research laboratories.

The project would install one backup diesel-powered generator in the loading dock/service area of the building, and it would require periodic (typically monthly) testing.
3.5.2 Parking and Roadways

The proposed project site is located immediately north of Parking Lot 50, and is accessed by Garrod Drive. The project would be designed in such a manner as to accommodate a possible realignment of a portion of Garrod Drive into Parking Lot 50, which would essentially shift the entrance to this parking lot to the northernmost parking bay. A realignment of Garrod Drive may be implemented concurrent with construction of the building, or could be implemented at a future date; the timing of the realignment is uncertain and dependent upon funding. Moving Garrod Drive would allow the campus to extend the Arboretum further north into the campus, which is an LRDP objective for the campus open space systems. The realignment would also clarify the access to the Veterinary Medicine Teaching Hospital, which would improve wayfinding to this important regional public institution. Figure 3.3 shows the possible realignment. The project would create mixed-mode service vehicle, pedestrian and bicycle paths along the west and north of the proposed building, and through site planning and path layout would create the conditions for connecting to a potential future bicycle undercrossing that could occur as part of a realignment of Garrod Drive. The project would include a loading dock, and would construct a driveway from the Garrod Drive entry road to Parking Lot 50 to access the loading dock. The access driveway would be designed to work with either the existing road configuration or the planned realignment of Garrod Drive. There would be regular service vehicle and small panel van trips to the project facility, and semi-truck deliveries approximately once per month. Appropriate safety controls would be designed into the project to ensure pedestrian, bicycle, and vehicular safety in the vicinity of the loading dock access.

Currently, a temporary road runs north-south through the site to provide access to a small service vehicle parking lot and Parking Lot 56. This road was improved from a bicycle path to accommodate closure of the access road to Lot 56 from Health Sciences Drive due to construction of the Multi-use Stadium. By fall 2007, a reconstructed northern access road will be completed from Hutchison Drive to Lot 56, and the proposed project would remove the southern half of the temporary road, replacing it with a bicycle/pedestrian path that would also be accessible to service vehicles and provide access to the service vehicle parking lot.

The project would install bicycle racks on the north side of the building, near existing racks north of the Veterinary Medicine Instructional Facility.

3.5.3 Landscaping

The proposed project would provide landscaping and outdoor furnishings. Landscaping for the project would include some trees and native or drought-tolerant grasses in an informal style that would blend with and extend the nearby Arboretum landscape. A drainage swale would be used for stormwater management along the southern edge of the project, similar to the designed swale at the adjacent Veterinary Medicine Instruction Facility. Most of the existing trees on site would be protected in place, with the exception of four trees. Two olive trees would require relocation in the event that Garrod Drive is realigned to enter at the northern edge of Parking Lot 50. Olive trees typically withstand relocation with a high success rate. One on-site Aleppo pine is in severe decline and would be removed, and a crape myrtle sapling and a valley oak sapling would be removed to accommodate road and pathway realignments. Site furnishings would likely include cast-in-place seating. Additional outdoor lighting would be installed along the planned paths and plazas at the front and back of the building, and along the driveway to the loading dock. All new lighting would conform to campus design standards for full cut-off fixtures to reduce light shed to the night sky.

3.5.4 Utilities and Infrastructure

As discussed briefly below and analyzed in Section 7.16, the proposed project would require connections to campus utilities and infrastructure including the following:
- **Domestic Water:** The proposed project would install a new domestic water line to the south of the building, with one connection point on the existing water main to the east of the project site and the other connection point to an existing line west of the project site. The utility study for the proposed project recommends installation of two new fire hydrants on the south side of the building, subject to review and approval by the UC Davis Fire Department. Estimated project demand is 19.0 gallons per minute (gpm) for domestic usage, 750 gpm for fire sprinklers, and 2,500 gpm for fire water. The campus Draft Domestic Water Master Plan indicates sufficient capacity and pressure in the distribution system to support the project.

- **Utility Water:** The proposed project would connect to an existing utility water pipe east of the project site. The project is estimated to have a peak demand of 40 gpm. The campus Utility Water Master Plan indicates sufficient capacity and pressure to serve the project.

- **Sanitary Sewer:** The proposed point of connection is at a manhole on the existing 12” line to the east of the project site. Estimated project demand is 22,800 gallons per day. System capacity is adequate in the collection system to service the project.

- **Storm Drainage:** Project site runoff enters storm drain inlets that drain to the Arboretum Waterway. Existing drain inlets on the southern portion of the site would require relocation in order to accommodate the proposed building. With respect to on-site storm water runoff management, a bioswale is proposed on the southern side of the building to handle some of the runoff generated by the new building and paving. All other site runoff that could not be managed by the bioswale would be collected in the storm drain system and piped to the Arboretum, in the same manner that most other storm water on campus is currently managed. In addition, a 24-inch storm drain pipe runs north-south through the project site where the building footprint is planned. With respect to the storm water "subwatershed" managed by that pipe, the project would study opportunities to handle the storm water through overland solutions to provide more percolation and use of storm water. If the study determines that such solutions prove infeasible, the project would relocate the pipe around the building.

- **Electricity:** The proposed point of connection is at the existing pull box located northwest of the project site. New conduits would be installed from the pull box to the project, and a new switch would be required of the project. Based on the projected peak load demand (2,000kVA) of the project, cable would need to be pulled from the Garrod Drive switchgear, to the southwest of the project site. According to the January 2004 Infrastructure report, the project would require the completion of the Electrical Improvements, Phase 3 (EI3) project (approved in December 2005, State Clearinghouse #2005092018) in order to be able to meet electrical service demands. The EI3 project is estimated to complete construction in 2008, which is two years in advance of the proposed project construction completion and occupancy.

- **Natural Gas:** The proposed point of connection is at an existing tap to the east. The gas line would be stubbed in to the building, but no lab connections would be made, as the expected users of the building will not have any immediate needs for natural gas use.

- **Chilled Water:** The proposed point of connection for chilled water is on the existing 20” chilled water main line located just to the south of the project site. The project is anticipated
to demand approximately 450 tons, and computer modeling demonstrated adequate pressure and supply in the system to support the project with no additional improvements.

- **Steam**: The proposed point of connection is at an existing steam manhole in the utility corridor to the east of the project. The anticipated demand of the project is approximately 6,000 pounds/hour. In order to meet this demand and other demand in the district for steam service, the project would loop the system in the district, which is currently served only by a long line. The loop line would be trenched to the north of the project site, from Dairy Road, across La Rue Road, along the southern edge of the Multi-use Stadium site. With this loop, the steam system would have adequate capacity to serve the project.

- **Telecommunications**: The proposed point of connection is at a manhole immediately southwest of the project site. New conduits would be installed from this manhole to the proposed Veterinary Medicine 3B telecommunications room. Service would be provided through the area distribution frame (ADF) for the Health Sciences District. Capacity is available at both the ADF and the central system for the proposed project.

### 3.5.5 Sustainable Design Elements

The proposed project would comply with the Regental Policy on Green Building Design and Clean Energy Standards, and would meet the campus baseline as applicable to the project.

The proposed project anticipates exceeding California Title 24 energy efficiency requirements by approximately 25-35%. The project would achieve such efficiency through offsetting electric lighting with natural daylight, radiant heating and cooling supplemented with operable windows in the office areas, chilled beam cooling in the labs and internal spaces and high-efficiency supply and exhaust fans. Other sustainable design elements include low-flow water fixtures and swales for stormwater management.

### 3.5.6 Population

The proposed project would not increase the campus population. Faculty and students would be relocated from Haring Hall and Surge 3 in the core of campus to the proposed Veterinary Medicine 3B building in the Health Sciences District. A separate project would take place to renovate Haring Hall, and that renovated space would be used to relieve overcrowding in other departments on campus.

### 3.6 Construction Schedule and Staging

Construction of the proposed project is anticipated to begin in late fall 2008 and end in late fall 2010. Construction staging (storage of building materials and construction equipment and vehicles) is anticipated to be contained entirely on the proposed project site. Contractor parking associated with the proposed project would be located in nearby spaces or on site.

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2 UC Davis has established a campus baseline, which is the minimum number of applicable Leadership in Energy and Environmental Design (LEED) rating system “points” that each project on the campus will achieve. With the passage of the Regental Policy on Green Building Design and Clean Energy Standards, each campus in the UC System was required to devise a campus baseline. While the UC System does not require each system campus to apply for United States Green Building Council LEED certification, the UC has committed to achieving a level of building performance comparable to that of LEED certification. The campus baseline provides the starting level of building performance objectives for all campus projects, with the exception of medical facilities.
4 CONSISTENCY WITH THE 2003 LRDP AND 2003 LRDP EIR

In order to determine the proposed project's consistency with the 2003 LRDP and 2003 LRDP EIR, the following questions must be answered:

- Is the proposed project included in the scope of the development projected in the 2003 LRDP?
- Is the proposed location of the project in an area designated for this type of use in the 2003 LRDP?
- Are the changes to campus population associated with the proposed project included within the scope of the 2003 LRDP's population projections?
- Are the objectives of the proposed project consistent with the objectives adopted for the 2003 LRDP?
- Is the proposed project within the scope of the cumulative analysis in the 2003 LRDP EIR?

The following discussion describes the proposed project's relationship to and consistency with the development projections, population projections, land use designations, objectives, and cumulative impacts analyses contained in the 2003 LRDP and 2003 LRDP EIR.

4.1 2003 LRDP SCOPE OF DEVELOPMENT

The proposed project would provide modern, efficient wet-laboratory and office space for the School of Veterinary Medicine (SVM), consolidate the SVM in the Health Sciences District, and release existing SVM facilities in the core of the campus to be renovated for general academic office and dry-laboratory space.

The 2003 LRDP anticipates academic and administrative space on campus will increase to approximately 7,175,000 asf through 2015-16. In fall 2002, the campus had only approximately 4,475,000 asf of academic and administrative space. The proposed project, with 76,100 asf of academic/administrative space, in combination with other recently approved and currently proposed projects, would not increase academic and administrative building space on campus to levels that would exceed those projected for 2015-16. Therefore, the proposed project is well within the 2003 LRDP's scope of academic and administrative development.

4.2 2003 LRDP LAND USE DESIGNATION

The proposed project site is designated for Academic and Administrative land uses in the 2003 LRDP. The project would construct academic and administrative space, consistent with the land use designation for the site.

4.3 2003 LRDP POPULATION PROJECTIONS

The 2003 LRDP projects that, through 2015-16, the on-campus population will increase to include approximately 30,000 students, 14,500 faculty and staff, and 3,240 non-UC employees. In addition,
the total number of household members associated with students and employees living in on-campus housing is expected to increase to approximately 29,803. The fall 2003 on-campus faculty and staff headcount was approximately 10,500, and the 2002-03 three-quarter average on-campus student population was approximately 26,650 (UC Davis ORMP 2003a and b). The proposed project, which would introduce no new students and no new members of the faculty and staff population, in combination with other recently approved and currently proposed projects, would not increase the campus population to a level that would approach that projected for 2015-16. Therefore, the proposed project is well within the 2003 LRDP’s on-campus population projections.

4.4 2003 LRDP Objectives

The primary objective of the 2003 LRDP is to plan for the Davis campus’ share of the University of California’s short- and long-term enrollment demands. In addition, the 2003 LRDP aims to:

- create a physical framework to support the teaching, research, and public service mission of the campus;
- manage campus lands and resources in a spirit of stewardship for the future; and
- provide an environment that enriches campus life and serves the greater community.

The proposed project would advance these main 2003 LRDP objectives by providing needed academic research and office space to support the School of Veterinary Medicine, one of 27 accredited schools of veterinary medicine in the United States, and the only public school in California offering instructional programs for professional veterinary degrees.

In addition, the 2003 LRDP includes specific objectives that are relevant to the proposed project, including the following:

Academic Districts and Neighborhood Centers: Support the creation of distinct academic neighborhoods and the aesthetic cohesiveness within such neighborhoods. Provide gathering spaces in academic neighborhoods to serve as centers of activity and places of identity. [2003 LRDP, p. 41].

Academic Facilities Growth: Provide flexibility to locate 2.5 million additional square feet in Academic and Administrative land use, largely through infill development in the Academic Core and Health Sciences District. [2003 LRDP, p. 59].

The proposed project would advance the 2003 LRDP objectives relating to academic space by constructing 76,100 asf of space to support the objectives of the School of Veterinary Medicine, to consolidate the School in the Health Sciences District, and to release space in the core of campus for renovation and use by other academic units.

Bikeways: Sustain and expand the system of off-street bike paths, on-street bike lanes, and bicycle parking areas throughout the campus. [2003 LRDP, p. 41].

Bicycle and Pedestrian Systems: Accompany new development with appropriate additions to the bicycle and pedestrian networks. [2003 LRDP, p. 78].

The proposed project would advance the 2003 LRDP objectives relating to facilitating bicycle transportation by adding a bicycle pathway and parking. The appropriate location and number of additional bike spaces would be designed, taking into account project objectives and campus standards on number of spaces according to occupancy rates.
Health Sciences District, Interconnected Spaces: Provide connected series of walkways and open spaces to create a cohesive campus environment. [2003 LRDP, p. 42].

Arboretum Expansion: Expand the Arboretum east of the Health Sciences District to provide open space amenities to this part of campus, and to better connect to the open space network in the Academic Core. [2003 LRDP, p. 84].

The proposed project would advance the 2003 LRDP objective relating to connected walkways and open spaces by continuing a pedestrian walkway from the Veterinary Medicine Instructional Facility plaza (west of the project site) and connecting that walkway to a front entrance public plaza. And, with the potential realignment of Garrod Road, the proposed project would create an opportunity for the Arboretum to expand towards the Health Sciences District and connect to open spaces in the District as well as the Academic Core.

4.5 2003 LRDP EIR Cumulative Impacts Analyses

In addition to evaluating the environmental effects directly associated with projected campus development, the 2003 LRDP EIR evaluates the cumulative effects of campus development combined with off-campus development through 2015-16. The cumulative context considered in the 2003 LRDP EIR varies, depending on the nature of the issue being studied, to best assess each issue's geographic extent. For example, the cumulative impacts on water and air quality can be best analyzed within the boundaries of the affected resources, such as water bodies and air basins. For other cumulative impacts, such as hazard risks, traffic, and the need for new public service facilities, the cumulative impact is best analyzed within the context of the population growth and associated development that are expected to occur in the region.

As discussed in Sections 4.1 through 4.4 above, the proposed project is within the scope of campus development projected in the 2003 LRDP EIR. In addition, the campus is unaware of any changes to local growth plans or other changes in the region since certification of the 2003 LRDP EIR that would substantially change the document's conclusions regarding cumulative impacts. Therefore, the proposed project would incrementally contribute to, but would not exceed, the cumulative impacts analyses included in the 2003 LRDP EIR.

The environmental resource discussions that follow in this document conclude that the project would result in the following types of cumulative impacts.

- The proposed project would not contribute to significant and unavoidable cumulative impacts identified in the 2003 LRDP EIR related to: loss of scenic vistas (Section 7.1); conversion of prime farmland (Section 7.2); loss of wetland and riparian habitat (Section 7.4); loss of valley elderberry beetle habitat (Section 7.4); construction of police and fire service facilities (Section 7.13); construction of school facilities (Section 7.13); development of recreation facilities (Section 7.14); degraded intersection and freeway operations (Section 7.15); and construction of wastewater treatment facilities (Section 7.16).

- The proposed project would incrementally contribute to, but would not exceed, significant and unavoidable cumulative impacts identified in the 2003 LRDP EIR related to: degradation of visual character or quality (Section 7.1); increases in light and glare (Section 7.1); increases in criteria pollutant emissions (Section 7.3); loss of habitat for Swainson's hawks and burrowing owls (Section 7.4); loss of archaeological and historical resources (Section 7.5); degraded receiving water quality (Section 7.8); increased water extraction from the deep aquifers (Section 7.8); increased water extraction from the shallow/intermediate aquifers (Section 7.8); and increased ambient noise levels (Section 7.11).
- The proposed project would incrementally contribute to, but would not exceed, less-than-significant cumulative impacts identified in the 2003 LRDP EIR related to: exposure to carbon monoxide concentrations (Section 7.3); increased toxic air contaminants (Section 7.3); exposure to seismic ground shaking (Section 7.6); use and transport of hazardous materials and generation of hazardous wastes (Section 7.7); exceedance of storm water drainage systems (Section 7.8); discharge of treated effluent to Putah Creek (Section 7.8); and expansion of water, solid waste, energy, and natural gas systems (Section 7.16).
5 ENVIRONMENTAL RESOURCES POTENTIALLY AFFECTED

As discussed in Section 2.3 above, it has been determined that the proposed project would not result in any potentially significant impact that were not sufficiently addressed and mitigated to the extent feasible by the 2003 LRDP EIR. Therefore, this Tiered Analysis provides adequate environmental review of the project, and a Negative Declaration could be prepared. However, for this project, the campus has opted to prepare a focused Tiered EIR in lieu of a negative declaration. The focused Tiered EIR will revisit potential impacts of the project that were found to be significant and unavoidable at the project level, specifically air quality impacts from daily operational and construction emissions that would exceed Yolo-Solano Air Management District thresholds, cultural resources impacts causing substantial adverse change in the significance of a unique archaeological resource, as defined in CEQA guidelines 15064.5, where the values that contribute to the significance of the resources could not be preserved through documentation and data recovery, and hydrology impacts to the deep and shallow/intermediate aquifers from increased water extraction and increased areas of impervious surfaces. Even though CEQA’s tiering provisions would authorize a negative declaration to be prepared in this instance because the LRDP EIR contains an adequate project-level analysis for these impacts, the campus has elected to prepare a focused Tiered EIR to confirm the LRDP EIR’s findings.

- Aesthetics
- Agricultural Resources
- Air Quality
- Biological Resources
- Cultural Resources
- Geology, Soils & Seismicity
- Hazards & Hazardous Materials
- Hydrology & Water Quality
- Land Use & Planning
- Mineral Resources
- Noise
- Population & Housing
- Public Services
- Recreation
- Transportation, Circulation & Parking
- Utilities/Service Systems
- Mandatory Findings of Significance
6 DETERMINATION

On the basis of this initial evaluation:

☐ The proposed project COULD NOT have a significant effect on the environment that has not been previously addressed in the 2003 LRDP EIR, and no new mitigation measures, other than those previously identified in the 2003 LRDP EIR, are required. A NEGATIVE DECLARATION will be prepared and a proposed Negative Declaration is included in Appendix A.

☐ The proposed project COULD have a significant effect on the environment that has not been previously addressed in the 2003 LRDP EIR, and __ new project-specific mitigation measures, in addition to those previously identified in the 2003 LRDP EIR, are required to reduce this effect to such a point that clearly no significant impact would occur. A MITIGATED NEGATIVE DECLARATION will be prepared.

☒ The proposed project COULD NOT have a significant effect on the environment that has not been previously addressed in the 2003 LRDP EIR, and no new mitigation measures, other than those previously identified in the 2003 LRDP EIR, are required. A NEGATIVE DECLARATION could be prepared. However, to confirm the analysis in the 2003 LRDP EIR, a TIERED ENVIRONMENTAL IMPACT REPORT will be prepared to analyze the impact conclusion in certain identified areas. (Please see the section of this Initial Study entitled “Scope of the Focused Tiered EIR.”)

☐ The proposed project MAY have a potentially significant effect on the environment that was not previously addressed in the 2003 LRDP EIR. A TIERED ENVIRONMENTAL IMPACT REPORT will be prepared to address new impacts not previously identified in the 2003 LRDP EIR.
7 EVALUATION OF ENVIRONMENTAL IMPACTS

Introduction

The following Environmental Checklist form is based on the checklist suggested in Appendix G of the CEQA Guidelines, and it has been adapted to assist in evaluating the environmental effects of the proposed project with respect to the analysis in the 2003 LRDP EIR.

The Environmental Checklist identifies potential project effects as corresponding to the following categories of impacts:

- **Potentially Significant Impact**: An effect that was not previously addressed in the 2003 LRDP EIR and may be significant based on substantial evidence and the appropriate significance criteria. If the project may result in one or more Potentially Significant Impacts, an EIR is required. This Tiered Initial Study does not identify any potentially significant impacts that were not addressed in the 2003 LRDP, and therefore, no EIR is required.

- **Less than Significant with Mitigation Incorporated**: An effect that was not adequately addressed in the 2003 LRDP EIR, but with the implementation of project-specific mitigation measures, is reduced from potentially significant to less than significant. This Tiered Initial Study does not identify any potentially significant impacts that were not previously addressed in the 2003 LRDP EIR; therefore, no project-specific mitigation measures are required.

- **Impact for Which the 2003 LRDP EIR is Sufficient**: An effect that was adequately addressed and mitigated to the extent feasible in the 2003 LRDP EIR (the Program EIR). For these effects, the Tiered Initial Study explains how the effect was addressed in the 2003 LRDP EIR and why the criteria for supplemental environmental review under CEQA Section 21166 (project changes, changed circumstances, and/or new information) have not been triggered. Effects correspond to this category under the following circumstances:
  a) The 2003 LRDP EIR found the impact would be reduced to a less-than-significant level with the implementation of applicable 2003 LRDP EIR mitigation measures;
  b) The impact is significant and unavoidable at a cumulative level, and the 2003 LRDP EIR fully addressed the cumulative impact; or
  c) The impact is significant and unavoidable at a project level, and the LRDP EIR contained an adequate project-level analysis for the impact.

- **Less than Significant Impact**: An effect for which only less than significant impacts result.

- **No Impact**: The project does not create an impact.
7.1 AESTHETICS

7.1.1 Background

Section 4.1 of the 2003 LRDP EIR addresses the aesthetics effects of campus growth under the 2003 LRDP. The following discussion summarizes information presented in the ‘Setting’ subsection of Section 4.1 of the 2003 LRDP EIR.

Campus

The campus is surrounded by extensive agricultural uses to the west and south, and by residential, institutional, and commercial land uses in the City of Davis to the north and east. Views within the Davis area are generally of two types: open views of agricultural land and supporting facilities with views of hills to the west, and views of developed areas within UC Davis and the City of Davis.

UC Davis consists of four general land units that have distinct visual characters. The central campus is the most developed area of campus and is characterized by varied architectural styles, large trees, and formal landscaping. The west and south campus units and Russell Ranch primarily include teaching and research fields with agricultural buildings (although the west and south campus units also include more developed areas including campus support facilities and academic and administrative facilities).

The 2003 LRDP identifies the following as valued visual elements of the central campus: the large, open lawn of the Quad at the heart of the campus; the framework of tree-lined streets, particularly around the Quad where the street tree branches arch to create a canopy overhead; the Arboretum, with its large trees and variety of landscapes along the waterway; the shingle-sided buildings from the founding years of the University Farm; buildings from the second era of campus development such as Hart Hall and Walker Hall; green open spaces that face the community along Russell Boulevard and A Street; bicycles as a distinct and valued visual emblem on campus; and the South Entry area, including the new entrance quad and the Robert and Margrit Mondavi Center for the Performing Arts.

Design review of campus development projects takes place during the project planning, design, review, and approval processes to sustain valued elements of the campus’ visual environment, to assure new projects contribute to a connected and cohesive campus environment, and to otherwise minimize adverse aesthetics effects as feasible. Formal design review by the campus Design Review Committee takes place for every major capital project. This Committee includes standing members from the Offices of Resource Management and Planning, Architects and Engineers, Grounds, and other departments concerned with potential aesthetic effects, as well as program representatives and invited design professionals with expertise relevant to the project type. Campus design standards and plans that provide the basis for design review include the 2003 LRDP, the Campus Standards and Design Guide manual, the campus Architectural Design Guidelines, and the Campus Core Study.

Project Site

The project site can be seen from surrounding facilities, such as the Veterinary Medicine Instructional Facility and the Veterinary Medicine Teaching Hospital; parts of Parking Lot 50; Garrod Drive; La Rue Road; parts of the Arboretum; and the Unitrans Maintenance Facility. The project site is partially screened from Parking Lot 50 by a row of trees, but is otherwise an open field, covered in non-native grasses and forbs. Views from the site include Garrod Drive and the Unitrans Maintenance Facility, the Arboretum, Parking Lot 50, and several of the buildings in the Health Sciences District. The embankments for Schaal Aquatic Center and the Multi-use Stadium are also visible from the site. There are no views of the Coast Range from the site.
7.1.2 2003 LRDP EIR Standards of Significance

The 2003 LRDP EIR considers an aesthetic impact significant if growth under the 2003 LRDP would:

- Have a substantial adverse effect on a scenic vista.
  A scenic vista is defined as a publicly accessible viewpoint that provides expansive views of a highly valued landscape. On campus, the open view across agricultural lands west to the Coast Range is considered a scenic vista. This vista is primarily viewed from public viewpoints along SR 113, Hutchison Drive, La Rue Road, and Russell Boulevard.

- Substantially degrade the existing visual character or quality of the site and its surroundings.
  For the campus, this standard is interpreted in terms of the effect of development under the 2003 LRDP on the valued elements of the visual landscape identified in the LRDP, or the effect associated with allowing incompatible development in or near areas with high visual quality such as Putah Creek and the Arboretum Waterway.

- Create a new source of substantial light or glare that would adversely affect daytime or nighttime views in the area.

An additional standard from the CEQA Guidelines' Environmental Checklist (“b” in the checklist below) was found not applicable to campus growth under the 2003 LRDP.

7.1.3 2003 LRDP EIR Impacts and Mitigation Measures

Impacts of campus growth under the 2003 LRDP through 2015-16 on aesthetics are evaluated in Section 4.1 of the 2003 LRDP EIR. As analyzed in Section 4 of this Initial Study, the proposed project is within the scope of analysis in the 2003 LRDP EIR. Significant and potentially significant aesthetics impacts identified in the 2003 LRDP EIR that are relevant to the proposed project are presented below with their corresponding levels of significance before and after application of mitigation measures identified in the 2003 LRDP EIR. Mitigation measures are relevant to reduce the magnitude of cumulative impacts 4.1-5 and 4.1-6, but these impacts are identified as significant and unavoidable because the feasibility and/or implementation of mitigation falls within other jurisdictions and therefore cannot be guaranteed by the University of California.

<table>
<thead>
<tr>
<th>2003 LRDP EIR Impacts</th>
<th>Level of Significance Prior to Mitigation</th>
<th>Level of Significance After Mitigation</th>
</tr>
</thead>
<tbody>
<tr>
<td>AESTHETICS</td>
<td></td>
<td></td>
</tr>
<tr>
<td>4.1-2</td>
<td>Development on campus from implementation of the 2003 LRDP could degrade the visual character of the campus by substantially degrading the valued elements of the visual landscape identified in the 2003 LRDP.</td>
<td>PS</td>
</tr>
<tr>
<td>4.1-3</td>
<td>Development under the 2003 LRDP could create substantial light or glare on campus that could adversely affect daytime or nighttime views in the area.</td>
<td>PS</td>
</tr>
<tr>
<td>4.1-5</td>
<td>Development allowed under the 2003 LRDP, in conjunction with other development in the region could substantially degrade the existing visual character or quality of the region.</td>
<td>S</td>
</tr>
<tr>
<td>4.1-6</td>
<td>Implementation of the 2003 LRDP together with cumulative development in the region would create new sources of light and glare that could adversely affect daytime or nighttime views in the region.</td>
<td>S</td>
</tr>
</tbody>
</table>

Levels of Significance: LS=Less than Significant, S=Significant, PS=Potentially Significant, SU=Significant and Unavoidable
Mitigation measures in the 2003 LRDP EIR that are applicable to the proposed project are presented below. Since these mitigation measures are already being carried out as part of implementation of the 2003 LRDP, they will not be readopted in this Initial Study. The benefits of these mitigation measures will be achieved independently of considering them as specific mitigation measures of this project. Nothing in this Initial Study in any way alters the obligations of the campus to implement 2003 LRDP EIR mitigation measures.

### 2003 LRDP EIR Mitigation Measures

#### AESTHETICS

- **4.1-2(a)** New structures, roads, and landscaping at UC Davis shall be designed to be compatible with the visual elements and policies identified in the 2003 LRDP.

- **4.1-2(b)** Prior to design approval of development projects under the 2003 LRDP, the campus Design Review Committee must determine that project designs are consistent with the valued elements of the visual landscape identified in the 2003 LRDP, applicable planning guidelines, and the character of surrounding development so that the visual character and quality of the project area are not substantially degraded.

- **4.1-3(a)** Design for specific projects shall provide for the use of textured nonreflective exterior surfaces and nonreflective glass.

- **4.1-3(b)** Except as provided in LRDP Mitigation 4.1-3(c), all new outdoor lighting shall utilize directional lighting methods with shielded and cutoff type light fixtures to minimize glare and upward directed lighting.

- **4.1-3(c)** Non-cutoff, non-shielded lighting fixtures used to enhance nighttime views of walking paths, specific landscape features, or specific architectural features shall be reviewed by the Campus Design Review Committee prior to installation to ensure that: (1) the minimum amount of required lighting is proposed to achieve the desired nighttime emphasis, and (2) the proposed illumination creates no adverse effect on nighttime views.

- **4.1-3(d)** The campus will implement the use of the specified lighting design and equipment when older lighting fixtures and designs are replaced over time.

- **4.1-5(a)** Implement LRDP Mitigation 4.1-2(a) and (b).

- **4.1-5(b)** The cities of Davis, Woodland, Winters, and Dixon, and Yolo and Solano counties can and should implement policies in their plans that address the protection of scenic resources and maintenance of visual quality.

- **4.1-6(a)** Implement LRDP Mitigation 4.1-3(a) and (b).

- **4.1-6(b)** The City of Davis and other surrounding jurisdictions can and should adopt (if necessary) and implement development standards and guidelines, which support the minimal use of site lighting for new developments.

### 7.1.4 Environmental Checklist and Discussion

#### AESTHETICS

<table>
<thead>
<tr>
<th>Would the project...</th>
<th>Potentially Significant Impact</th>
<th>Less than Significant Impact with Mitigation</th>
<th>Impact for which 2003 LRDP EIR is Sufficient</th>
<th>Less than Significant Impact</th>
<th>No Impact</th>
</tr>
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<tbody>
<tr>
<td>a)</td>
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<td>b)</td>
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<td>d)</td>
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</table>
a) The 2003 LRDP EIR defined a scenic vista as an expansive view of a highly valued landscape from a publicly accessible viewpoint, and identified the only scenic vista on the UC Davis campus to be the view west across agricultural land to the Coast Range. On and near campus, viewpoints along SR 113, Hutchison Drive, La Rue Road, and Russell Boulevard provide scenic vistas to the west across agricultural land to the Coast Range. The project site is neither visible from a scenic vista, nor has a view of a scenic vista. No impact would occur.

b,c) The campus is not located near a state scenic highway. However, the 2003 LRDP EIR found that development on campus under the 2003 LRDP could degrade the visual character of the campus by substantially degrading the valued elements of the campus' visual landscape, which are identified above in the background discussion and include specific treed areas, historic buildings, and open space areas (Impact 4.1-2). The project site is not currently adjacent to the Arboretum, but an articulated campus goal in the 2003 LRDP would involve extending the Arboretum further into the campus, including towards the proposed project site. The project landscaping and building design would take into account this goal and the landscaping would include grasses and trees that would reflect the types and style of plantings found towards the west end of the Arboretum, near the project site. In compliance with LRDP Mitigation 4.1-2(a), the proposed project would be designed to be compatible with the visual elements and policies identified in the 2003 LRDP. In compliance with LRDP Mitigation 4.1-2(b), the campus Design Review Committee would review the project design for consistency with the valued elements of the campus' visual landscape, applicable planning guidelines, and the character of surrounding development. With implementation of these measures, which are relevant to the project, the project's potential impact on scenic resources and visual character would be less than significant.

The 2003 LRDP EIR found that development under the 2003 LRDP together with other development in the region could substantially degrade the existing visual character or quality of the region (Impact 4.1-5). LRDP Mitigation 4.1-5(a), included in the proposed project, requires the campus to implement Mitigation Measure 4.1-2(a-b), discussed above. LRDP Mitigation 4.1-5(b) indicates that local jurisdictions can and should implement policies that protect scenic resources and visual quality. However, the feasibility and/or implementation of LRDP Mitigation 4.1-5(b) cannot be guaranteed by the University of California because enforcement and monitoring fall within other jurisdictions. For this reason, the impact is considered significant and unavoidable. This impact was adequately analyzed in the 2003 LRDP EIR and was fully addressed in the Findings and Statement of Overriding Considerations adopted by The Regents in connection with its approval of the 2003 LRDP. No conditions have changed and no new information has become available since certification of the 2003 LRDP EIR that would alter this previous analysis.

d) The 2003 LRDP EIR found that development on campus under the 2003 LRDP could create substantial light or glare that could adversely affect daytime or nighttime views in the area (Impact 4.1-3). The proposed project would include a projecting stairwell on the south side of the building which would be partially clad in glass and lit at night, creating a glowing architectural element at night. The project would add some nighttime lighting along sidewalks installed around the building, and along the bike path and the driveway to the loading dock. The stairwell and nighttime lighting would be designed in such a way as to minimize any impact on the nearby Arboretum. In compliance with LRDP Mitigation 4.1-3(a), the project would use textured nonreflective exterior surfaces and nonreflective glass. In compliance with LRDP Mitigation 4.1-3(b-c), new outdoor lighting associated with the project would use directional lighting methods with shielded and cutoff type light fixtures to minimize glare and upward directed lighting, except in specific, limited locations to enhance nighttime views of walking paths, specific landscape features, or specific architectural features, such as the proposed stairwell. In compliance with this measure, the Campus Design Review Committee will also review the
The proposed project’s use of non-directional lighting design to ensure that no significant adverse effects on nighttime views occur. In compliance with LRDP Mitigation 4.1-3(d), the campus will replace older lighting fixtures over time with directional lighting. With implementation of LRDP Mitigation 4.1-3(a-d), which is included in the proposed project, the project’s impact associated with light and glare would be less than significant.

The 2003 LRDP EIR found that campus development under the 2003 LRDP in conjunction with other development in the region would add new sources of light and glare that could adversely affect daytime or nighttime views in the area (Impact 4.1-6). LRDP Mitigation 4.1-6(a), included in the proposed project, requires the campus to implement Mitigation Measure 4.1-3(a) and (b), discussed above. LRDP Mitigation 4.1-6(b) indicates that local jurisdictions can and should adopt and implement development standards and guidelines that support reduced lighting. However, the feasibility and/or implementation of LRDP Mitigation 4.1-6(b) cannot be guaranteed by the University of California because enforcement and monitoring fall within other jurisdictions. For this reason, the impact is considered significant and unavoidable. This impact was adequately analyzed in the 2003 LRDP EIR and was fully addressed in the Findings and Statement of Overriding Considerations adopted by The Regents in connection with its approval of the 2003 LRDP. No conditions have changed and no new information has become available since certification of the 2003 LRDP EIR that would alter this previous analysis.

Summary

Mitigation measures 4.1-2(a-b), 4.1-3(a-d), 4.1-5 (a-b), and 4.1-6(a-b) from the 2003 LRDP EIR are relevant to the proposed project and reduce the significance of aesthetics impacts to the extent feasible. The proposed project would not exceed the levels of significance of aesthetics impacts previously addressed in the 2003 LRDP EIR, nor would it introduce any new significant aesthetics impacts that were not previously addressed.
7.2  AGRICULTURAL RESOURCES

7.2.1  Background

Section 4.2 of the 2003 LRDP EIR addresses the agricultural resources effects of campus growth under the 2003 LRDP. The following discussion summarizes information presented in the ‘Setting’ subsection of Section 4.2 of the 2003 LRDP EIR.

Campus

As discussed in the 2003 LRDP EIR, of the approximately 5,300 acres of campus land, the California Department of Conservation’s Farmland Mapping and Monitoring Program (FMMP) designates approximately 3,700 acres as Prime Farmland and approximately 90 acres as Farmland of Local Importance. The FMMP designates the remaining 1,520 acres of campus land as Urban and Built-Up (approximately 1,400 acres) and Other Land (approximately 120 acres). Most of the campus’ agricultural lands are located on the west and south campuses and at Russell Ranch. The central campus includes land primarily designated as Urban and Built-Up, but small areas within the central campus that are used for teaching and research fields and community gardens are designated as Prime Farmland.

The 2003 LRDP EIR identifies that development under the 2003 LRDP through 2015-16 could result in conversion of approximately 745 acres of campus land that is considered prime farmland by the California Department of Conservation to nonagricultural uses. Approximately 330 acres of this land would be converted to habitat at Russell Ranch, which would not result in an irreversible loss of prime soil. Mitigation under the 2003 LRDP EIR requires the conservation of prime farmland at a one-to-one (1:1) ratio for prime farmland converted to developed uses and a one-third–to–one (1/3:1) ratio for prime farmland converted to habitat at Russell Ranch.

Project Site

There are no agricultural resources on or adjacent to the project site. The FMMP designates the western half of the project site as Urban and Built-Up Land, and designates the eastern half as Other Land. The site is currently an open field, covered in non-native grasses and forbs, managed for weed and rodent control. Roads and parking lots lie to the east and south of the project site. West and northwest of the site are veterinary and medical sciences buildings. The Schaal Aquatic Center, and the Multi-Use Stadium are north of the site, with open space between these facilities and the project site.

7.2.2  2003 LRDP EIR Standards of Significance

The 2003 LRDP EIR considers an agricultural impact significant if growth under the 2003 LRDP would:

- Convert prime farmland, unique farmland or farmland of statewide importance, as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency to nonagricultural use.
- Involve other changes in the existing environment which, due to their location or nature, could result in conversion of farmland considered prime, unique, or of statewide importance to nonagricultural use.
- Conflict with existing zoning for agricultural use or a Williamson Act contract.
7.2.3 2003 LRDP EIR Impacts and Mitigation Measures

Impacts of campus growth under the 2003 LRDP through 2015-16 on agricultural resources are evaluated in Section 4.2 of the 2003 LRDP EIR. As analyzed in Section 4 of this Initial Study, the proposed project is within the scope of analysis in the 2003 LRDP EIR. There are no significant agricultural impacts that were identified in the 2003 LRDP EIR that are relevant to the proposed project, and no agricultural resources mitigation measures identified in the 2003 LRDP EIR are required for the project.

7.2.4 Environmental Checklist and Discussion

<table>
<thead>
<tr>
<th>AGRICULTURAL RESOURCES</th>
<th>Potentially Significant Impact</th>
<th>Less than Significant with Mitigation</th>
<th>Impact for which 2003 LRDP EIR is Sufficient</th>
<th>Less than Significant Impact</th>
<th>No Impact</th>
</tr>
</thead>
<tbody>
<tr>
<td>a) Convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland), as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to non-agricultural use?</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
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</tr>
<tr>
<td>b) Conflict with existing zoning for agricultural use, or a Williamson Act contract?</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
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<td>☑</td>
</tr>
<tr>
<td>c) Involve other changes in the existing environment which, due to their location or nature, could result in conversion of Farmland to non-agricultural use?</td>
<td>☐</td>
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<td>☐</td>
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</tbody>
</table>

a) The proposed project site is designated as both “Urban and Built-Up Land” and “Other Land” under the Farmland Mapping and Monitoring Program. No Farmland would be converted. Thus, the proposed project would not contribute to either a project-level or a cumulative impact associated with conversion of Prime Farmland, Unique Farmland, or Farmland of Statewide Importance to a non-agricultural use. No impact would occur.

b) Campus lands are state lands and are not eligible for Williamson Act agreements, nor are they subject to local zoning controls. The proposed project site is designated as both “Urban and Built-Up Land” and “Other Land” by the State of California Department of Conservation, and is designated for an Academic and Administrative land use in the 2003 LRDP. Therefore, the proposed project would not conflict with existing zoning for agricultural use or a Williamson Act contract, and no impact would occur.

c) The proposed project would not involve any activity that could conflict with existing zoning for agricultural use or a Williamson Act contract, and no impact would occur.

Summary

No agricultural resource LRDP EIR Mitigation Measures from the 2003 LRDP EIR are relevant to the proposed project. The proposed project would not exceed the levels of significance of agricultural impacts previously addressed in the 2003 LRDP EIR, nor would it introduce any new significant agricultural impacts that were not previously addressed.
7.3  AIR QUALITY

7.3.1  Background

Section 4.3 of the 2003 LRDP EIR addresses the air quality effects of campus growth under the 2003 LRDP on air quality. The following discussion summarizes information presented in the ‘Setting’ subsection of Section 4.3 of the 2003 LRDP EIR.

Campus

The campus is subject to air quality regulation programs under both the federal Clean Air Act (CAA) and the California Clean Air Act (CCAA). Both the federal and state statutes provide for ambient air quality standards to protect public health, timetables for progressing toward achieving and maintaining ambient standards, and the development of plans to guide the air quality improvement efforts of state and local agencies. Within the campus vicinity, air quality is monitored, evaluated, and controlled by the U.S. Environmental Protection Agency (EPA), the California Air Resources Board (CARB), and the Yolo-Solano Air Quality Management District (YSAQMD). The YSAQMD is one of five air districts located in the Sacramento Valley Air Basin (SVAB) and has jurisdiction over air quality in the Yolo County and the northeastern portion of Solano County.

Historically, air quality laws and regulations have divided air pollutants into two broad categories: “criteria pollutants” and “toxic air contaminants.” Federal and state air quality standards have been established for the following ambient air pollutants, the criteria pollutants: ozone (O₃), carbon monoxide (CO), nitrogen dioxide (NO₂), sulfur dioxide (SO₂), particulate matter less than 10 microns in diameter (PM₁₀), lead (Pb), and particulate matter less than 2.5 microns in diameter (PM₂.₅). Ozone is evaluated by assessing emissions of its precursors: reactive organic gases (ROG) and NOₓ.

Toxic air contaminants (TACs) are airborne pollutants for which there are no air quality standards but which are known to have adverse human health effects. TACs are regulated under federal and state statutes, primarily with control technology requirements for stationary and mobile sources and mitigation established following human health risk assessments. TACs are generated by a number of sources, including stationary sources such as dry cleaners, gas stations, combustion sources, and laboratories; mobile sources such as automobiles; and area sources such as farms, landfills, construction sites, and residential areas.

Air quality on campus on any given day is influenced by both meteorological conditions and pollutant emissions. In general, meteorological conditions vary more than pollutant emissions from day to day, and tend to have a greater influence on changes in measured ambient pollutant concentrations. Ambient concentrations of CO and PM₁₀, however are particularly influenced by local emission sources. The EPA has classified the entire SVAB, which includes the campus, as a severe nonattainment area for O₃. The CARB has also designated the area as being in nonattainment under the state ambient air quality standards for O₃ and PM₁₀. The designation of an area as attainment or nonattainment is based on monitored data throughout the SVAB.

Project Site

The proposed project site is located adjacent to Parking Lot 50 and the Veterinary Medicine Instructional Facility. There are no sensitive receptors on or adjacent to the project site. (Sensitive receptors include children, the elderly, and people with health problems who are more often susceptible to respiratory infections and other air-quality-related health problems, as per the 2003 LRDP EIR, p 4.3-16.) Existing air pollutant sources on or near the site include operation of motorized
vehicles and landscape maintenance equipment, fume hoods associated with nearby research facilities, and emergency generators associated with nearby buildings.

### 7.3.2 2003 LRDP EIR Standards of Significance

The 2003 LRDP EIR considers an air quality impact significant if growth under the 2003 LRDP would:

**Criteria Pollutants**

- Conflict with or obstruct implementation of the applicable air quality plan.
- Violate any air quality standard or contribute substantially to an existing or projected air quality violation. (According to the YSAQMD, emissions of NO\textsubscript{x} and ROG in excess of 82 pounds a day, CO emissions in excess of 550 pounds a day, and 150 pounds a day for PM\textsubscript{10} would be considered significant.)
- Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable federal or state ambient air quality standard (including releasing emissions which exceed quantitative thresholds for ozone precursors).
- Expose sensitive receptors to substantial pollutant concentrations.
- Create objectionable odors affecting a substantial number of people.

**Toxic Air Contaminants**

- Contribute to the probability of contracting cancer for the Maximally Exposed Individual (MEI) exceeding the AB 2588 and Proposition 65 threshold of 10 in one million.
- Result in a noncarcinogenic (chronic and acute) health hazard index greater than the AB 2588 threshold of 1.0.

### 7.3.3 2003 LRDP EIR Impacts and Mitigation Measures

Impacts of campus growth under the 2003 LRDP through 2015-16 on air quality are evaluated in Section 4.3 of the 2003 LRDP EIR. As analyzed in Section 4 of this Initial Study, the proposed project is within the scope of analysis in the 2003 LRDP EIR. Significant and potentially significant air quality impacts identified in the 2003 LRDP EIR that are relevant to the proposed project are presented below with their corresponding levels of significance before and after application of mitigation measures identified in the 2003 LRDP EIR. Mitigation is relevant to reduce the magnitude of project-level impact 4.3-1 and cumulative impact 4.3-6, but these impacts are identified as significant and unavoidable because they cannot be fully mitigated. Mitigation is identified to reduce the magnitude of project-level impact 4.3-3, but this impact is identified as significant and unavoidable due to uncertainty about the effectiveness of the mitigation.

<table>
<thead>
<tr>
<th>2003 LRDP EIR Impacts</th>
<th>Level of Significance Prior to Mitigation</th>
<th>Level of Significance After Mitigation</th>
</tr>
</thead>
<tbody>
<tr>
<td>AIR QUALITY</td>
<td></td>
<td></td>
</tr>
<tr>
<td>4.3-1</td>
<td>Implementation of the 2003 LRDP would result in daily operational emissions above the YSAQMD thresholds that may contribute substantially to a violation of air quality standards or hinder attainment of the regional air quality plan.</td>
<td>S</td>
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</tbody>
</table>
Mitigation measures in the 2003 LRDP EIR that are applicable to the proposed project are presented below. Since these mitigation measures are already being carried out as part of implementation of the 2003 LRDP, they will not be readopted in this Initial Study. The benefits of these mitigation measures will be achieved independently of considering them as specific mitigation measures of this project. Nothing in this Initial Study in any way alters the obligations of the campus to implement 2003 LRDP EIR mitigation measures.

### 2003 LRDP EIR Mitigation Measures

#### AIR QUALITY

| 4.3-3 | Emissions from construction activities associated with the 2003 LRDP would exceed YSAQMD thresholds. | S | SU |
| 4.3-6 | Implementation of the 2003 LRDP, in conjunction with other regional development, would result in a cumulatively considerable increase of non-attainment pollutants. | S | SU |
| 4.3-8 | Regional growth could result in an increase in toxic air contaminants if compensating technological improvements are not implemented. | PS | LS |

Levels of Significance: LS=Less than Significant, S=Significant, PS=Potentially Significant, SU=Significant and Unavoidable

<table>
<thead>
<tr>
<th>4.3-1(a) Vehicular Sources. The following measures will be implemented to reduce emissions from vehicles, as feasible.</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>• The campus shall continue to actively pursue Transportation Demand Management to reduce reliance on private automobiles for travel to and from the campus.</td>
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<tr>
<td>• Provide pedestrian-enhancing infrastructure to encourage pedestrian activity and discourage vehicle use.</td>
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</tr>
<tr>
<td>• Provide bicycle facilities to encourage bicycle use instead of driving.</td>
<td></td>
</tr>
<tr>
<td>• Provide transit-enhancing infrastructure to promote the use of public transportation.</td>
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<tr>
<td>• Provide facilities to accommodate alternative-fuel vehicles such as electric cars and CNG vehicles.</td>
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<tr>
<td>• Improve traffic flows and congestion by timing of traffic signals to facilitate uninterrupted travel.</td>
<td></td>
</tr>
<tr>
<td>• When the campus purchases new vehicles, the campus will evaluate the practicality and feasibility of acquiring low-pollution vehicles that are appropriate for the task and will purchase these types of vehicles when practical and feasible. When replacing diesel engines in existing equipment, the campus will install up-to-date technology.</td>
<td></td>
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</tbody>
</table>

<table>
<thead>
<tr>
<th>4.3-1(b) Area Sources. The following measures will be implemented to reduce emissions from area sources, as feasible.</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>• Use solar or low-emission water heaters in new or renovated buildings.</td>
<td></td>
</tr>
<tr>
<td>• Orient buildings to take advantage of solar heating and natural cooling and use passive solar designs.</td>
<td></td>
</tr>
<tr>
<td>• Increase wall and attic insulation in new or renovated buildings.</td>
<td></td>
</tr>
<tr>
<td>• For fireplaces or wood-burning appliances, require low-emitting EPA certified wood-burning appliances, or residential natural-gas fireplaces.</td>
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<tr>
<td>• Provide electric equipment for landscape maintenance.</td>
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</tbody>
</table>

| 4.3-1(c) The campus will work with the YSAQMD to ensure that emissions directly and indirectly associated with the campus are adequately accounted for and mitigated in applicable air quality planning efforts. The YSAQMD can and should adopt adequate measures consistent with applicable law to ensure that air quality standard violations are avoided. |  |
4.3-3(a) The campus shall include in all construction contracts the measures specified below to reduce fugitive dust impacts, including but not limited to the following:

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

4.3-3(c) The campus shall implement the following control measures to reduce emissions of ozone precursors from construction equipment exhaust:

- To the extent that equipment is available and cost effective, the campus shall encourage contractors to use alternate fuels and retrofit existing engines in construction equipment.
- Minimize idling time to a maximum of 5 minutes when construction equipment is not in use.
- To the extent practicable, manage operation of heavy-duty equipment to reduce emissions.
- To the extent practicable, employ construction management techniques such as timing construction to occur outside the ozone season of May through October, or scheduling equipment use to limit unnecessary concurrent operation.

4.3-6 Implement LRDP Mitigation 4.3-1(a-c).

4.3-8 EPA and CARB are expected to continue the development and implement programs to reduce air toxics, and UC Davis will continue its efforts in this area.

### 7.3.4 Environmental Checklist and Discussion

<table>
<thead>
<tr>
<th>AIR QUALITY</th>
<th>Potentially Significant Impact</th>
<th>Less than Significant Impact with Mitigation</th>
<th>Impact for which 2003 LRDP EIR is Sufficient</th>
<th>Less than Significant Impact</th>
<th>No Impact</th>
</tr>
</thead>
<tbody>
<tr>
<td>Would the project…</td>
<td></td>
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<td></td>
</tr>
<tr>
<td>a) Conflict with or obstruct implementation of the applicable air quality plan?</td>
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<td>☐</td>
<td>☒</td>
<td>☐</td>
<td>☐</td>
</tr>
</tbody>
</table>
b) Violate any air quality standard or contribute substantially to an existing or projected air quality violation? ☑ 

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

d) Expose sensitive receptors to substantial pollutant concentrations? ☑ 

e) Create objectionable odors affecting a substantial number of people? ☑ 

a,b,c,d) Construction

The 2003 LRDP EIR found that construction activities under the 2003 LRDP could exceed YSAQMD thresholds (Impact 4.3-3). The state 24-hour PM10 standards could be violated when multiple construction projects (especially those involving ongoing grading or excavation activities) occur simultaneously in the same area. Housing or other sensitive receptors located adjacent to construction areas could be affected by high concentrations of PM10. In addition, exhaust pollutants would be emitted during use of construction equipment.

There are no sensitive receptors on or adjacent to the project site. Construction of the proposed project would disturb an area of up to 2-½ acres. No other construction projects would occur simultaneously in the vicinity of the proposed project. The project would involve the short-term emission of exhaust pollutants from heavy construction equipment. Construction of the project would include grading, excavation, possible off-site hauling, and concrete pouring, among other typical construction activities. Construction of the proposed project would be expected to take approximately two years, during which time exhaust pollutants would be emitted during use of construction equipment.

Previously adopted LRDP Mitigations 4.3-3(a) (requiring campus construction contracts to include measures to reduce fugitive dust impacts), and 4.3-3(c) (requiring control measures to reduce emissions of ozone precursors from construction equipment exhaust) will be implemented as part of the proposed project, and would reduce the severity of impact. However, even with these measures, the proposed project would involve the short-term emission of exhaust pollutants from construction equipment.

The 2003 LRDP EIR found that the impact of the cumulative emissions from the totality of projects under construction at any given time under the 2003 LRDP would be significant and unavoidable. The impact was adequately analyzed in the 2003 LRDP EIR and was fully addressed in the Findings and Statement of Overriding Considerations adopted by The Regents in connection with its approval of the 2003 LRDP. No conditions have changed and no new information has become available since certification of the 2003 LRDP EIR that would alter this previous analysis.

Although air quality impacts due to construction emissions (Impact 4.3-3) have been sufficiently analyzed in the 2003 LRDP EIR, project specific impacts will be further evaluated in the project’s Focused Tiered EIR to confirm this finding.
Operation

Criteria Pollutants

The project would relocate members from central campus to the Health Sciences District (HSD), and patterns of travel may change, as members change their parking destinations to ones in the HSD. In addition, the Veterinary Medicine Storehouse, which is currently located in Haring Hall, would also be relocated to the proposed project facility. Delivery trips associated with that function would also move from central campus to the HSD. The proposed project would not increase the campus population and would not increase the number or length of motor vehicle trips to, from, or on the campus associated with the faculty, staff and students that would occupy the building. The project would install one backup diesel-powered generator, which would require periodic testing (typically monthly testing) and would marginally add to criteria pollutant loads in the region.

The 2003 LRDP EIR found that operational emissions under the 2003 LRDP could substantially contribute to violation of ambient state and federal air quality standards or hinder the attainment of the regional air quality plan (LRDP Impact 4.3-1). The project would contribute to this impact. The campus is located in an area that is in nonattainment of O₃ and PM₁₀ standards. The Sacramento Regional Clean Air Plan, which covers the campus, contains strategies for lowering the region’s emissions to meet the O₃ standard by 2005. However, campus growth under the 2003 LRDP through 2015-16 is not addressed by the current Clean Air Plan. LRDP Mitigation 4.3-1 (a-b), which includes measures that encourage alternative transportation and no- or low-emission building designs and operations, would help reduce daily emissions from campus vehicular and stationary sources. LRDP Mitigation 4.3-1(c) would ensure that the campus will coordinate with the YSAQMD during the update of the Clean Air Plan and other applicable air quality planning efforts. However, given the likelihood of exceedance of O₃ standards even with mitigation, it appears that the implementation of the 2003 LRDP, including the proposed project, could potentially hinder the attainment of the regional air quality plan. The impact is therefore considered significant and unavoidable at the LRDP program level. This impact was adequately analyzed in the 2003 LRDP EIR and was fully addressed in the Findings and Statement of Overriding Considerations adopted by The Regents in connection with its approval of the 2003 LRDP. No conditions have changed and no new information has become available since certification of the 2003 LRDP EIR that would alter this previous analysis.

Although air quality impacts due to daily operational emissions (Impact 4.3-1) have been sufficiently analyzed in the 2003 LRDP EIR, project specific impacts will be further evaluated in the project’s Focused Tiered EIR to confirm this finding.

Toxic Air Contaminants

The proposed project includes about 27,000 asf of wet laboratory space. Health Risk Assessment (HRA) calculations performed as part of the 2003 LRDP EIR modeled the potential human health risks from an increase in campus laboratory space, including additional laboratory space in the Health Sciences District as part of the proposed project. The 2003 HRA assumed a slightly larger amount of additional laboratory space would be constructed for the Veterinary Medicine 3B project than the square footage which is included in the proposed project. The HRA analysis assumed that the volume of emissions of toxic air contaminants is directly proportional to the square footage of the wet lab space (URS 2003). Given that the amount of wet lab space included in the proposed project is slightly less than the wet lab space modeled in the HRA for the Veterinary Medicine 3B building, the proposed project is within the scope of the previously conducted campus-wide HRA.
The HRA predicted that the cancer risk from campus operations through academic year 2015-16 will be below 10 in one million for both the off-campus and on-campus Maximally Exposed Individual, assuming a 70-year exposure period. The non-cancer health risk was calculated to be below 1.0 on the hazard index. Therefore, the 2003 LRDP EIR concluded that development under the 2003 LRDP would not exceed either health risk standard, and the impact associated with TAC generation would be less than significant.

Cumulative Development

The 2003 LRDP EIR found that implementation of the 2003 LRDP, in conjunction with other regional development, would contribute to emissions of criteria pollutants for which the region is in non-attainment status and could hinder attainment efforts (LRDP Impact 4.3-6). The YSAQMD has accounted for a certain amount of regional growth in the existing Sacramento Regional Clean Air Plan. This plan is currently being updated to extend beyond the year 2005, and campus growth under the 2003 LRDP will be incorporated in the plan update. LRDP Mitigation 4.3-6, included in the proposed project, requires implementation of LRDP Mitigation 4.3-1 (a-c). Regardless, because the YSAQMD remains a nonattainment area for ozone, this cumulative impact is considered significant and unavoidable. This impact was adequately analyzed in the 2003 LRDP EIR and was fully addressed in the Findings and Statement of Overriding Considerations adopted by The Regents in connection with its approval of the 2003 LRDP. No conditions have changed and no new information has become available since certification of the 2003 LRDP EIR that would alter this previous analysis.

e) The 2003 LRDP EIR concluded that odor impacts associated with development under the 2003 LRDP would be less than significant. The proposed project would not generate objectionable odors on campus and would not expose campus members to objectionable odors. No impact would occur.

Summary

Mitigation measures 4.3-1(a-c), 4.3-3(a, c), 4.3-6, and 4.3-8 from the 2003 LRDP EIR are relevant to the proposed project and reduce the significance of air quality impacts to the extent feasible. The proposed project would not exceed the levels of significance of air quality impacts previously addressed in the 2003 LRDP EIR, nor would it introduce any new significant air quality impacts that were not previously addressed.
7.4 Biological Resources

7.4.1 Background

Section 4.4 of the 2003 LRDP EIR addresses the effects of campus growth under the 2003 LRDP on biological resources. The following discussion summarizes information presented in the ‘Setting’ subsection of Section 4.4 of the 2003 LRDP EIR.

Campus

The 5,300-acre campus is located in a region that is composed primarily of urban areas and agricultural lands that include remnant riparian areas. Habitat types on campus can be classified as Agricultural Lands (including Cropland/Pasture, and Orchard/Vineyard), Valley Foothill Riparian Woodland, Ruderal/Annual Grassland, Open Water Ponds, Riverine, and Urban Landscaping/Developed.

The 2003 LRDP EIR considers special status species to be those taxa that are: (1) listed as threatened or endangered under either the California or Federal Endangered Species Acts; (2) candidates for either state or federal listing; (3) species afforded protection under the Fish and Game Code of California; (4) federal and California Department of Fish and Game (CDFG) “Species of Special Concern”; (5) CDFG “Species of Special Concern” highest and second priority lists; or (6) California Native Plant Society (CNPS) List 1-3 plants.

A database search identified 15 special status plant species, 8 special status invertebrates, 11 special status fish, 3 special status amphibians, 3 special status reptiles, 26 special status birds, and 7 special status mammals that have the potential to occur on or within a 10-mile radius of the campus. However, only a few of these species are known to occur on campus or have potential habitat present on campus, including: northern California black walnut, burrowing owl, Swainson’s hawk, valley elderberry longhorn beetle, California tiger salamander, chinook salmon, giant garter snake, steelhead, and northwestern pond turtle.

Project Site

The project site is an open field, covered in non-native grasses and forbs, currently managed for weed and rodent control and regularly surveyed for burrowing owls. The eastern portion of the site is characterized in the 2003 LRDP EIR as ruderal annual grassland habitat and the western portion as urban landscaping/developed. No elderberry shrubs are present on the site.

Habitat

Ruderal/Annual Grassland. Ruderal/Annual Grassland is found along the edges of roads and fields, vacant uncultivated areas, and along the levee banks and upland flood plain of Putah Creek. This habitat type is a result of regular past or current disturbance from agricultural practices, road and levee maintenance, and proximity to roads and buildings. It typically occurs as open treeless grassland composed primarily of annual plant species. However, since the early 1900s, no large areas of grassland remain on campus due to the extensive amounts of cultivation and development.

The composition of the Ruderal/Annual Grassland habitat consists largely of non-native introduced annual grasses and forbs. Because of the aggressive nature of these introduced plants, the virtual extirpation of many native species and continued disturbance, they have become naturalized as the dominant species and have excluded the growth of native perennial grassland species that occurred prior to settlement and cultivation of the area.
Grassland edges to fields and roads provide food, cover, and movement corridors for resident and migratory wildlife species. Small mammals, reptiles, and birds can be found in this habitat type. The burrowing owl is perhaps the most notable special-status wildlife species that has been observed nesting and foraging in Ruderal/Annual Grassland on campus.

**Urban Landscaping/Developed.** Urban habitat includes landscaped areas that are vegetated with trees, shrubs, and maintained grassy areas. While the University Arboretum contains a significant collection of botanical specimens, it is included within this habitat designation because it is essentially a landscaped park with many non-native plantings, and is subject to regular maintenance as well as high frequency use by people (picnicking, jogging, walking, etc.).

Central campus landscaped areas, with their abundance of mature trees, provide wildlife habitat values (food and cover) within the developed areas of central campus. Many species of birds (including the Swainson’s hawk) are known to nest in central campus trees. Other resident and migratory hawks, owls, songbirds, and woodpeckers are also known to use landscaped areas on the campus for nesting, food, and cover.

**Special Status Species**

**Burrowing Owl.** The burrowing owl (*Speotyto cunicularia*) is fully protected against take pursuant to Section 3503.5 of the California Fish and Game Code and is a CDFG species of special concern. In addition, biologists and environmental organizations concerned about the status of burrowing owls in California have proposed listing it under the California Endangered Species Act (CESA). Burrowing owls are small birds with the relatively unique habits of being active during the day as well as in the evening and nesting underground. They typically use burrow systems formerly occupied by ground squirrels or other large burrow dwelling rodents. Their diet is usually dominated by insects but may also include small mammals, reptiles, and amphibians. Burrowing owls generally forage in open fields with relatively sparse, short vegetation; their foraging ability is disrupted by dense, tall vegetation.

Nesting burrowing owls have been recorded at various central campus locations since 1981. No information has become available on the status of burrowing owls on the campus prior to 1981. A significant reduction in the number of breeding pairs has occurred since 22 pairs were observed in 1981. Only 12 pairs were observed in 1986, and breeding was not observed on the central campus from 1992 through 1997 (Jones and Stokes 1992-2000). During the last decade, nesting burrowing owls have been observed adjacent to the University Airport’s runway (1 pair) and sporadically on teaching and research fields west of SR 113 between Russell Boulevard and Hutchison Drive (1-2 pairs).

The declining population of burrowing owls on campus persisted longest on the open fields in and around the Health Sciences District. Most recently, these lands have been managed primarily for weed control, a practice that keeps the area open and potentially suitable for nesting and foraging by burrowing owls. Since at least the mid-1980s all campus actions related to management of these fields have considered the presence of burrowing owls.

The burrowing owl population in the Health Sciences District has been monitored routinely since the early 1990s (Jones and Stokes 1992-2000, May and Associates 2001-2002). From 1992 through 1998, burrowing owl surveys were conducted approximately nine times each year from February through November so that an opportunity to observe owls during the entire nesting season was possible. Beginning in January 1999, surveys have been conducted approximately once every three weeks. From 1993 through 1996, no burrowing owls were observed in the survey area. In 1997, burrowing owls were observed sporadically between March and November in the field east of the Health Sciences District. Although nesting was not documented in 1997, pellets and white wash were identified at a
burrow entrance in March of that year. In 1998 a single pair of burrowing owls nested near the intersection of Garrod Drive and Veterinary Medicine Drive. During 1999, two pairs of burrowing owls nested and fledged young in the fields east of the Health Sciences District. During 2000, two pairs of burrowing owls nested in the same field east of the Health Sciences District (Jones & Stokes Associates 1992-2000). The single pair that was present in the winter 2000-2001 was relocated to artificial burrows in the eastern portion of the field east of the Health Sciences District. Relocation was undertaken in compliance with CDFG guidelines as part of the UC Davis Veterinary Medicine Facilities Improvement Project. The relocated pair used the artificial burrow for several months, but has not been observed since. Young dispersing from other areas could become established on previously unoccupied campus sites. Ground squirrel colonies and scattered burrows along the edges of fields and roads represent potential nesting habitat for the burrowing owl. The area around the Health Sciences District is currently managed to protect nesting burrowing owls that may be present but to discourage the establishment of ground squirrel burrows and therefore any new burrowing owls.

**Swainson’s Hawk.** The Swainson’s hawk (*Buteo swainsoni*) is listed as a threatened species under the California Endangered Species Act and is also fully protected against take pursuant to Section 3503.5 of the Fish and Game Code of California. The Swainson’s hawk is a relatively large bird of prey that typically nests in large trees in riparian corridors as well as isolated trees remaining in or adjacent to agricultural fields in the Central Valley. However, in the City of Davis, and on the central campus, these hawks also nest in the large trees among buildings, roads, and dwellings.

This species forages in open grassland habitats and has adjusted to foraging in certain types of agricultural lands. The value of foraging habitat can be affected by a variety of characteristics, including density and availability of prey, proximity to disturbing features, and distance to nesting territories. Published information indicates these raptors typically forage within a 10 mile radius of nest sites but may range up to 18 miles from a nest site in search of suitable foraging habitat and available prey. Formal studies have shown that Swainson’s hawks will spend the majority of foraging time in close proximity to the nest site when high quality foraging habitat (measured by the abundance and availability of prey) is present.

The occurrence of the Swainson’s hawk in and around the campus is well documented. UC Davis conducted yearly surveys for Swainson’s hawk nests on the campus and within one half mile of the campus from 1991 through 1998. Project-specific surveys have been conducted annually since 1998. The results of these surveys documented approximately 20 active nests per year and a total of approximately 50 total nests within one-half mile of the campus over the decade. Most of the Swainson’s hawk nests are located in the Putah Creek riparian corridor.

**Trees**

A tree survey of the proposed site was conducted in accordance with the campus practice for identifying trees to preserve during a development or redevelopment project.

<table>
<thead>
<tr>
<th>Species</th>
<th>Number Present on Site</th>
<th>Number to be Removed</th>
<th>Number to be Relocated</th>
</tr>
</thead>
<tbody>
<tr>
<td><em>Ailanthus altissima</em> (Tree of Heaven)</td>
<td>1</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td><em>Gleditsia triacanthos</em> (Honey Locust)</td>
<td>1</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td><em>Lagerstroemia indica</em> (Crape Myrtle)</td>
<td>3</td>
<td>1</td>
<td>0</td>
</tr>
<tr>
<td><em>Olea europaea</em> (Olive)</td>
<td>2</td>
<td>0</td>
<td>2</td>
</tr>
<tr>
<td><em>Pinus halepensis</em> (Aleppo pine)</td>
<td>3</td>
<td>1</td>
<td>0</td>
</tr>
</tbody>
</table>
### 7.4.2 2003 LRDP EIR Standards of Significance

The 2003 LRDP EIR considers a biological resources impact significant if growth under the 2003 LRDP would:

- Result in a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Game (CDFG) or U.S. Fish and Wildlife Service (USFWS).
- Result in the “take” (defined as kill, harm, or harass) of any listed threatened or endangered species or the habitat of such species.
- Result in a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations or by the CDFG or USFWS.
- Result in a substantial adverse effect on federally protected wetlands as defined by Section 404 of the Clean Water Act (including, but not limited to, marsh, vernal pool, or coastal wetland) through direct removal, filling, hydrological interruption, or other means.
- Interfere substantially with the movement of any native resident or migratory fish, or wildlife species or with established native, resident, or migratory wildlife corridors, or impede the use of native wildlife nursery sites.
- Conflict with any applicable local policies protecting biological resources such as a tree protection policy or ordinance.

An additional standard from the CEQA Guidelines’ Environmental Checklist (“f” in the checklist below) was found not applicable to campus growth under the 2003 LRDP.

### 7.4.3 2003 LRDP EIR Impacts and Mitigation Measures

Impacts of campus growth under the 2003 LRDP through 2015-16 on biological resources are evaluated in Section 4.4 of the 2003 LRDP EIR. As analyzed in Section 4 of this Initial Study, the proposed project is within the scope of analysis in the 2003 LRDP EIR. Significant and potentially significant biological resources impacts identified in the 2003 LRDP EIR that are relevant to the proposed project are presented below with their corresponding levels of significance before and after application of mitigation measures identified in the 2003 LRDP EIR. Mitigation measures are included to reduce the magnitude of cumulative impact 4.4-12, but this impact is identified as significant and unavoidable because the feasibility and/or implementation of mitigation falls within other jurisdictions and therefore cannot be guaranteed by the University of California.
<table>
<thead>
<tr>
<th>2003 LRDP EIR Impacts</th>
<th>Level of Significance Prior to Mitigation</th>
<th>Level of Significance After Mitigation</th>
</tr>
</thead>
<tbody>
<tr>
<td>BIOLOGICAL RESOURCES</td>
<td></td>
<td></td>
</tr>
<tr>
<td>4.4-2 Development allowed under the 2003 LRDP would result in the conversion of approximately 550 acres of Agricultural Land and Ruderal/Annual Grassland habitat to campus-related development which would result in the loss of general wildlife habitat for resident and migratory species, including foraging habitat for the Swainson’s hawk.</td>
<td>PS</td>
<td>LS</td>
</tr>
<tr>
<td>4.4-3 Development allowed under the 2003 LRDP would result in the conversion of approximately 65 acres of Agricultural Land and Ruderal/Annual Grassland habitat suitable for nesting burrowing owls to campus-related development.</td>
<td>PS</td>
<td>LS</td>
</tr>
<tr>
<td>4.4-4 Development allowed under the 2003 LRDP could result in the failure of nesting efforts by nesting raptors, including Swainson’s hawks or other birds of prey.</td>
<td>PS</td>
<td>LS</td>
</tr>
<tr>
<td>4.4-5 Development allowed under the 2003 LRDP would result in the loss of active nest sites for Swainson’s hawk.</td>
<td>PS</td>
<td>LS</td>
</tr>
<tr>
<td>4.4-11 Development under the 2003 LRDP could result in the removal of trees recognized to meet the campus’ standards for important trees, including: b. Specimen Trees: Healthy trees or stands of trees that are of high value to the campus due to their size, species, extraordinary educational and research value, and/or other exceptional local importance.</td>
<td>PS</td>
<td>b. LS</td>
</tr>
<tr>
<td>4.4-12 Development allowed under the 2003 LRDP would contribute 550 acres to the cumulative loss in the region of over 1,300 acres of Agricultural Land and Ruderal/Annual Grassland habitat for resident and migratory wildlife species including Swainson’s hawks and burrowing owls.</td>
<td>S</td>
<td>SU</td>
</tr>
</tbody>
</table>

Levels of Significance: LS=Less than Significant, S=Significant, PS=Potentially Significant, SU=Significant and Unavoidable

Mitigation measures in the 2003 LRDP EIR that are applicable to the proposed project are presented below. Since these mitigation measures are already being carried out as part of implementation of the 2003 LRDP, they will not be readopted in this Initial Study. The benefits of these mitigation measures will be achieved independently of considering them as specific mitigation measures of this project. Nothing in this Initial Study in any way alters the obligations of the campus to implement 2003 LRDP EIR mitigation measures.

<table>
<thead>
<tr>
<th>2003 LRDP EIR Mitigation Measures</th>
<th>BIOLOGICAL RESOURCES</th>
</tr>
</thead>
<tbody>
<tr>
<td>4.4-2 The campus shall mitigate the loss of foraging habitat due to development through the establishment of 650 acres of mitigation lands located within or near the Putah Creek Riparian Reserve. Approximately 370 acres of this area shall be converted from existing agricultural uses to restored Valley-Foothill Riparian Woodland and Valley Grassland at Russell Ranch. An additional 280 acres of agricultural land will be protected with a habitat and farmland conservation mechanism either at the Russell Ranch or the Kidwell and McConeghy parcels. These grassland and agricultural lands would be available as foraging habitat for Swainson’s hawk and other special-status species such as prairie falcon, golden eagle, wintering or migrating birds and birds of prey that may occasionally forage on campus lands. Restored Valley-Foothill Riparian Habitat would be available as nesting habitat for Swainson’s hawk and other birds of prey. An additional 15-acre mitigation area shall be established along the North Fork Cutoff. This area shall be restored as an oak-grassland and would be a nesting and foraging site for Swainson’s hawk and other birds of prey.</td>
<td></td>
</tr>
<tr>
<td>4.4-3(a) The Russell Ranch Mitigation Area shall include at least 195 acres of grassland habitat suitable for use by burrowing owls. Ground squirrels in the mitigation area shall not be subject to control measures and will be allowed to fluctuate in response to local conditions. Artificial burrows may be installed if ground squirrel populations are not providing a sufficient number of burrows to support burrowing owls.</td>
<td></td>
</tr>
</tbody>
</table>
2003 LRDP EIR Mitigation Measures
BIOLOGICAL RESOURCES

4.4-3(b) The campus shall survey proposed development areas with potential habitat for the presence or absence of burrowing owls.

4.4-3(c) The campus shall conduct a pre-construction survey of proposed project sites during the breeding season (from approximately February 1 through August 31), consistent with CDFG guidelines, in the same calendar year that construction is planned to begin. The survey shall be conducted by a qualified biologist to determine if any burrowing owls are nesting on or directly adjacent to any proposed project site. If phased construction procedures are planned for the proposed project, the results of the above survey shall be valid only for the season when it is conducted.

If the pre-construction breeding season survey does not identify any nesting raptor species on the project site, then no further mitigation would be required. However, should any burrowing owls be found nesting on the project site, then LRDP Mitigation 4.4-3(d) shall be implemented.

4.4-3(d) During the breeding season, the campus, consistent with CDFG guidelines, shall not disturb an occupied burrow while there is an active nest and/or juvenile owls are present. Avoidance shall include the establishment of a non-disturbance buffer zone around the nest site consistent with CDFG guidelines. The buffer zone shall be delineated by highly visible temporary construction fencing. The occupied nest site shall be monitored by a qualified biologist to determine when the juvenile owl is fledged and independent. Disturbance of an occupied burrow shall only occur outside the breeding season and when there is no nest or juvenile owl based on monitoring by a qualified biologist.

- Based on approval by CDFG, pre-construction and pre-breeding season exclusion measures may be implemented to preclude burrowing owl occupation of the project site prior to project-related disturbance. These include the following measures:

- Obviously inactive burrows in the project area will be closed. Active or potentially active ground squirrel burrows will be monitored to confirm use by ground squirrels and not by burrowing owls before ground squirrels are removed and the burrow is closed. One-way doors will be used on active burrows if use by ground squirrels cannot be confirmed.

- The owls will be displaced from the occupied burrows according to the CDFG burrowing owl guidelines. The owls will be displaced from their burrows by installing one-way exit doors in occupied or potential burrows within the area of disturbance. After 48 hours with the doors in place, the burrows will then be closed to prevent reoccupation by owls.

- Where feasible, artificial burrows will be provided in adjacent suitable habitat consistent with CDFG guidelines.

4.4-4(a) The campus shall conduct a pre-construction survey of trees on and adjacent to a project site during the raptor breeding season (approximately March 1 to August 31). Additionally, the campus shall conduct surveys within a ½-mile radius of the site to determine the presence or absence of any nesting Swainson's hawks. The surveys shall be conducted by a qualified biologist during the same calendar year that the proposed activity is planned to begin to determine if any nesting birds-of-prey would be affected. If phased construction procedures are planned for the proposed activity, the results of the above survey shall be valid only for the season when it is conducted.

If any Swainson's hawks are nesting within a one-half-mile radius of the project site or if other raptors are nesting in, on or adjacent to the project site, a qualified biologist shall determine the potential for disturbance to nesting raptors, including Swainson's hawks. If the biologist determines that there is a significant potential for disturbance, the campus shall implement feasible changes in the construction schedule or make other appropriate adjustments to the project in response to the specific circumstances. If feasible project changes are not readily identifiable, the campus shall consult with CDFG to determine what actions should be taken to protect the nesting efforts. If, after five years, a previously recorded nest site remains unoccupied by a Swainson's hawk, it will no longer be considered as a Swainson's hawk nest site subject to this mitigation.

4.4-4(b) The campus shall continue to conduct annual surveys to determine the location of nesting Swainson's hawks and other birds of prey on the campus outside the Putah Creek corridor. If nesting Swainson's hawks are found during the survey at a previously unknown location within one-half mile of a project site and/or at a location closer to the project or more visually exposed to the project site than a nearby previously documented site, a qualified biologist shall, prior to project construction, determine the potential for disturbance to nesting Swainson's hawks. If the biologist determines that there is a significant potential for disturbance, the campus shall implement feasible changes in the construction schedule or make other appropriate adjustments to the project in response to the specific circumstances (e.g. relocating noisy
The implementation of LRDP Mitigations 4.4-4(a) and (b) shall be conducted under the supervision of a biologist whose qualifications include:

- A bachelor’s degree in biology or a related field;
- Two years of field experience related to nesting raptors; and
- Prior construction monitoring experience.

Further:

- All decisions of the qualified biologist shall be made in consultation with the California Department of Fish and Game;
- Monitoring shall be conducted for a sufficient time (minimum of 3 consecutive days following the initiation of construction) to verify that the nesting pair does not exhibit significant adverse reaction to construction activities (i.e., changes in behavioral patterns, reactions to construction noise, etc.); and
- Nest site monitoring will continue for a minimum of once a week through the nesting cycle at that nest.

4.4-5

Mitigation 4.4-4(a) and (b) will be implemented, including pre-construction survey of trees on and adjacent to a project site during the raptor breeding season (approximately March 1 to August 31). If a Swainson’s hawk nest tree is present, the tree will be removed outside the nesting season (March-May).

4.4-11

Before a project is approved under the 2003 LRDP, the campus will perform a tree survey of the project site. Grounds, the Office of Resource Management and Planning, and the Office of Architects and Engineers will provide input about tree classifications and will modify project design to avoid important trees if feasible. If a project cannot avoid an important tree, the following will apply:

b. If a project would necessitate removal of a Specimen Tree, the project would relocate the tree if feasible, or would replace the tree with the same species or species of comparable value (relocation or replacement should occur within the project area if feasible). This would reduce the impact to a less-than-significant level.

4.4-12

Implementation of LRDP Mitigations 4.4-1(a), (b), and (c); 4.4-2(a) and (b); 4.4-3(a) and (b); and 4.4-7(a) in combination with the Yolo County NCCP and Solano County HCP, including compliance with the regulatory and permitting requirements imposed by the USFWS and the CDFG.

### 7.4.4 Environmental Checklist and Discussion

**BIOLOGICAL RESOURCES**

<table>
<thead>
<tr>
<th>Would the project…</th>
<th>Potentially Significant Impact</th>
<th>Less than Significant with Mitigation</th>
<th>Impact for which 2003 LRDP EIR is Sufficient</th>
<th>Less than Significant Impact</th>
<th>No Impact</th>
</tr>
</thead>
<tbody>
<tr>
<td>a) Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Game or U.S. Fish and Wildlife Service?</td>
<td>☐</td>
<td>☐</td>
<td>☑</td>
<td>☐</td>
<td>☐</td>
</tr>
<tr>
<td>b) Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations or by the California Department of Fish and Game or US Fish and Wildlife Service?</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☑</td>
</tr>
</tbody>
</table>
c) Have a substantial adverse effect on federally protected wetlands as defined by Section 404 of the Clean Water Act (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means? ☐ ☐ ☐ ☐ ☐ ☑

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

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

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

---

a) Plants

The 2003 LRDP EIR found that development under the 2003 LRDP could result in the loss of special-status plant species (LRDP Impact 4.4-1). The project site is highly disturbed and does not support suitable habitat for special status plant species potentially found on the UC Davis campus.

Wildlife

Burrowing Owl: The 2003 LRDP EIR found that development under the 2003 LRDP would result in conversion of ruderal annual grassland, which would result in loss of habitat suitable for nesting burrowing owls (LRDP Impact 4.4-3). The proposed project, including the road realignment and bike path and undercrossing, would result in the loss of approximately 4.5 acres of ruderal annual grassland. Burrowing owls have been found in the project region (Health Sciences District); therefore, the site could be suitable foraging habitat for burrowing owls and owls could nest on the site before construction begins. While surveys have been conducted nine to 20 times per year since 1993, no burrowing owls have been documented using the burrows on the site since 2001. Implementation of LRDP Mitigation Measures 4.4-3(a-d) would ensure that preconstruction surveys are conducted at the project site. If any occupied burrows of burrowing owls are found on site, they would not be disturbed. If necessary, pre-construction and pre-breeding season exclusion measures would be implemented. Cumulative loss of ruderal annual grassland, which provides habitat for burrowing owls, is addressed through implementation of LRDP Mitigation Measure 4.4-12. These mitigation measures would reduce LRDP impacts to less than significant, but cumulative loss of ruderal annual grassland in the region was determined to be a cumulatively significant impact.

Swainson’s Hawk: The 2003 LRDP EIR found that development under the 2003 LRDP would result in conversion of foraging habitat and could interfere with nesting efforts of Swainson’s Hawk or other birds of prey. Swainson’s Hawks have historically nested in the central campus area, and hawks could nest in trees around the project site before the start of construction. Six nest sites within ½-mile of the project site have been used over the last 10 to 15 years. In all cases, these nest sites are: (1) ¼-mile or greater from the project site; (2) screened by large trees and buildings; and (3) in areas with high levels of human activity. Due to screening by trees and buildings and habituation to existing levels of human activity, no impact is expected if birds use these existing nest sites during project construction. Construction of the proposed project could disturb nesting hawks if they nest closer during construction. Implementation of LRDP
Mitigation Measure 4.4-4, requiring pre-construction nesting surveys, would reduce this impact to a less-than-significant level. Should any nests be found, implementation of LRDP Mitigation Measures 4.4-4(a-b) and 4.4-5 would require the protection of active raptor nests through pre-construction surveys and avoidance of construction that would affect raptors during breeding season, to reduce these impacts to a less-than-significant level. Implementation of LRDP Mitigation Measure 4.4-2 would ensure that foraging habitat is preserved on campus and would mitigate the loss of foraging habitat due to development through the establishment of 650 acres of mitigation lands. Cumulative loss of ruderal annual grassland is addressed through LRDP Mitigation Measure 4.4-12. These mitigation measures would reduce LRDP impacts to less than significant, but cumulative loss of ruderal annual grassland was determined to be a significant and unavoidable impact. The impact was adequately analyzed in the 2003 LRDP EIR and was fully addressed in the Findings and Statement of Overriding Considerations adopted by The Regents in connection with approval of the 2003 LRDP. No conditions have changed and no new information is available since certification of the 2003 LRDP EIR that would alter this previous analysis.

b,c) No riparian and wetland areas exist on the project site, and the proposed project would have no impact on riparian or wetland areas. Therefore, no impact would occur.

d) The Putah Creek corridor, which is the southern boundary of the campus, is the principal corridor for the movement of native resident and migratory fish and wildlife through the UC Davis campus. It is the regional connection between the hills in western Yolo County and the Sacramento River. The project is approximately 1 mile north of the Putah Creek corridor. The project would not interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites. No impact would occur.

e) Pursuant to LRDP Mitigation Measure 4.4-11, the campus performs a tree survey of a project site prior to project approval, and modifies the project design to the extent feasible to avoid tree removal or provides additional mitigation if removal of heritage or specimen trees cannot be avoided. The campus performed a tree survey of the project site (UC Davis Buildings, Grounds, and Agricultural Services, 2007). Two olive trees were identified as important to preserve in place or relocate, and five other trees were identified as desirable to preserve in place. A valley oak was identified on the project site, but it is a sapling, and therefore not considered a heritage tree. The project design calls for new trees to be planted both north and south of the building. A landscape of native grasses and oak trees, similar to the adjacent Gladys Valley Hall Veterinary Medicine Instructional Facility, is proposed for the southern side of the project. The project design will incorporate the existing trees on site to the extent possible; however, one Aleppo pine tree is in decline and will need to be removed, a crape myrtle will need to be removed for alignment of the pedestrian path/fire access road running north-south on the west side of the project site, and the valley oak sapling would need to be removed for the possible realignment of Garrod Road, in order to create the most appropriate road realignment for safe negotiation by vehicles. The two olive trees, which are near the oak sapling, would be relocated as part of the possible road realignment. Olive trees generally tolerate relocation very well, so no loss of the trees is anticipated as a result of relocating them. If possible, the sapling valley oak tree will be preserved in a planter box. Relocation of the olive trees would fulfill LRDP Mitigation Measure 4.4-11b, and would reduce this impact to less than significant.

f) The campus does not fall within the boundaries of, nor is it adjacent to, an adopted regional Habitat Conservation Plan (HCP) or Natural Community Conservation Plan (NCCP). The campus has implemented two low effects HCPs for Valley Elderberry Longhorn Beetle at Russell Ranch. The project is not located at Russell Ranch and would not interfere with these plans.
Therefore, the proposed project would not conflict with an adopted HCP or NCCP, and no impact would occur.

**Summary**

Mitigation measures 4.4-2, 4.4-3(a-d), 4.4-4(a-b), 4.4-5, 4.4-11(b), and 4.4-12 from the 2003 LRDP EIR are relevant to the proposed project and reduce the significance of impacts on biological resources to the extent feasible. The proposed project would not exceed the levels of significance of biological resource impacts previously addressed in the 2003 LRDP EIR, nor would it introduce any new significant biological resource impacts that were not previously addressed.
7.5 Cultural Resources

7.5.1 Background

Section 4.5 of the 2003 LRDP EIR addresses the effects of campus growth under the 2003 LRDP on cultural resources. The following discussion summarizes information presented in the ‘Setting’ subsection of Section 4.5 of the 2003 LRDP EIR.

Campus

Cultural resources on campus include prehistoric and historic resources. Prehistoric resources are those sites and artifacts associated with the indigenous, non-Euroamerican population, generally dating prior to contact with people of European descent. Historic resources include structures, features, artifacts, and sites that date from Euroamerican settlement of the region.

Archaeological Resources

The campus lies in the ethnographic territory of the Patwin. Since 1991, extensive archaeological investigations (survey, testing, monitoring, and/or excavation) have been conducted on campus in conjunction with the development of campus projects (Nadolski 2003). Patwin sites, including burials, have been identified at several locations on the central campus. Areas within 800 feet of the banks of the historic channel of Putah Creek and its tributaries and slough channels, and within 800 feet of specific known archaeological sites, have been identified as archaeologically sensitive zones on campus.

Historic Resources

The earliest direct historic contacts in the Davis area probably occurred during 1806 to 1808. Farming on a large scale began in the Davis area in the 1850s. A “university farm” was established at Davis in 1906, classes began in 1909, and Davis became a general University of California campus in 1959. No properties within the campus are listed on the National Register of Historic Places. Six properties on or near the campus have been recorded with the California Inventory of Historic Resources. Historic architectural features typically must be at least 50 years of age to be considered for listing on the California Register of Historical Resources (CRHR).

Project Site

No historic resources exist on or adjacent to the site. The eastern portion of the site falls within the archaeologically sensitive zone along the former Putah Creek channel, as delineated in the 2003 LRDP EIR. Previous archaeological surveys in the surrounding areas have not uncovered any cultural resources. The site was historically used for orchards and row crops, and has been managed for weed control since the early 1970s. An archaeological investigation, which included archival research, a surface inspection, and subsurface auger testing, was completed for the project site (Pacific Legacy 2007). No intact cultural deposits or features were identified in the project area.

7.5.2 2003 LRDP EIR Standards of Significance

In addition to the following archaeological and historical standards of significance identified in the 2003 LRDP EIR, an additional standard from the CEQA Guidelines’ Environmental Checklist (“c” in the checklist below) was found not applicable to campus growth under the 2003 LRDP.
Archaeological Resources

The 2003 LRDP EIR considers an impact on archaeological resources significant if growth under the 2003 LRDP would:

- Cause a substantial adverse change in the significance of a unique archaeological resource pursuant to CEQA Guideline § 15064.5.
- Disturb any human remains, including those interred outside of formal cemeteries.

A “unique archaeological resource” is defined under CEQA through Public Resources Code Section 21083.2(g). A unique archaeological resource implies an archaeological artifact, object, or site about which it can be clearly demonstrated that there is a high probability that it meets one of the following criteria:

- The archaeological artifact, object, or site contains information needed to answer important scientific questions and there is a demonstrable public interest in that information, or
- The archaeological artifact, object, or site has a special and particular quality, such as being the oldest of its type or the best available example of its type, or
- The archaeological artifact, object, or site is directly associated with a scientifically recognized important prehistoric or historic event or person.

For a resource to qualify as a unique archaeological resource, the agency must determine that there is a high probability that the resource meets one of these criteria without merely adding to the current body of knowledge (PRC § 21083.2(g)). An archaeological artifact, object, or site that does not meet the above criteria is a nonunique archaeological resource (PRC § 21083.2(h)). An impact on a nonunique resource is not a significant environmental impact under CEQA (CEQA Guidelines § 15064.5(c)(4)). If an archaeological resource qualifies as a historical resource under CRHR or other criteria, then the resource is treated as a historical resource for the purposes of CEQA (CEQA Guidelines § 15064.5(c)(2)).

Section 15064.5 of the CEQA Guidelines assigns special importance to human remains and specifies procedures to be used when Native American remains are discovered. These procedures are detailed under PRC § 5097.98. California Health and Safety Code § 7050.5(b) prohibits disturbance of human remains uncovered by excavation until the Coroner has made a finding relative to PRC § 5097 procedures.

Historical Resources

For the purposes of this EIR, as mandated by PRC § 21083.2, impacts of the proposed project on an historical resource would be considered significant if it would:

- cause a significant adverse change in the significance of a historical resource as defined in CEQA Guidelines § 15064.5.

The standards of significance for historical resources are based on Appendix G and § 15064.5 of the CEQA Guidelines. Accordingly, historical resources include resources listed in, or determined to be eligible for listing in, the CRHR; resources included in a qualifying local register (such as the City of Davis Register of Historic Resources); and resources that the lead agency determines to meet the criteria for listing in the CRHR. These criteria may apply to any historic built environmental feature,
and to historic or prehistoric archaeological sites. Properties or sites that are eligible for inclusion in the CRHR are termed “historical resources.” Under the provisions of CEQA Guidelines §15064.5(a)(3), generally a lead agency should find that a property is historically significant if it determines that the property meets one or more of the criteria for listing on the CRHR, which extend to any building, structure, feature or site that:

- is associated with events that have made a significant contribution to the broad patterns of California’s history and cultural heritage;
- is associated with lives of persons important in our past;
- embodies the distinctive characteristics of a type, period, region, or method of construction, or represents the work of an important creative individual, or possesses high artistic values; or
- has yielded, or may be likely to yield, information important in prehistory or history.

With few exceptions, to qualify as a historical resource a property must be at least 50 years old and also must retain physical integrity and integrity to its period of significance. For historic structures and buildings, significantly altering the setting, remodeling, or moving the structure may diminish or destroy its integrity. However, under some conditions, a building that has been moved or altered may still retain its historic significance. Landscaping or landscape features may in some cases contribute to the significance of an historic architectural property. Such elements would be assessed as part of the evaluation of the related historic architectural property. Archaeological sites may also qualify as historical resources under CEQA Guideline Section 15064.5(a)(3). Archaeological sites most often are assessed relative to CRHR Criterion D (for potential to yield data important to history or prehistory). An archaeological deposit that has been extensively disturbed and archaeological artifacts found in isolation may not be eligible for listing on the CRHR, because the lack of stratigraphic context may reduce the potential for the resource to yield significant data. A resource that does not meet one of the criteria for eligibility to the CRHR is not a historical resource under CEQA, and impacts to such a property are not significant.

### 7.5.3 2003 LRDP EIR Impacts and Mitigation Measures

Impacts of campus growth under the 2003 LRDP through 2015-16 on cultural resources are evaluated in Section 4.5 of the 2003 LRDP EIR. As analyzed in Section 4 of this Initial Study, the proposed project is within the scope of analysis in the 2003 LRDP EIR. Significant and potentially significant cultural resources impacts identified in the 2003 LRDP EIR that are relevant to the proposed project are presented below with their corresponding levels of significance before and after application of mitigation measures identified in the 2003 LRDP EIR. Mitigation measures are included to reduce the magnitude of project-level impact 4.5-3 and cumulative impact 4.5-5, but these impacts are identified as significant and unavoidable because they cannot be fully mitigated.

<table>
<thead>
<tr>
<th>2003 LRDP EIR Impacts</th>
<th>Level of Significance Prior to Mitigation</th>
<th>Level of Significance After Mitigation</th>
</tr>
</thead>
<tbody>
<tr>
<td>4.5-1</td>
<td>PS</td>
<td>LS</td>
</tr>
<tr>
<td></td>
<td>Implementation of the 2003 LRDP could damage or destroy an archaeological resource or historic building or structure as the result of grading, excavation, ground disturbance or other project development.</td>
<td></td>
</tr>
<tr>
<td>4.5-2</td>
<td>PS</td>
<td>LS</td>
</tr>
<tr>
<td></td>
<td>Implementation of the LRDP could cause a substantial adverse change in the significance of a historical resource or unique archaeological resource, as defined in CEQA guidelines 13064.3, as the result of ground disturbance, alteration, removal or demolition associated with project development.</td>
<td></td>
</tr>
</tbody>
</table>
Mitigation measures in the 2003 LRDP EIR that are applicable to the proposed project are presented below. Since these mitigation measures are already being carried out as part of implementation of the 2003 LRDP, they will not be readopted in this Initial Study. The benefits of these mitigation measures will be achieved independently of considering them as specific mitigation measures of this project. Nothing in this Initial Study in any way alters the obligations of the campus to implement 2003 LRDP EIR mitigation measures.

### 2003 LRDP EIR Mitigation Measures

#### CULTURAL RESOURCES

| 4.5-1(a) | As early as possible in the project planning process, the campus shall define the project's area of potential effects (APE) for archaeological resources and, if structures are present on the site, for historic structures. The campus shall determine the potential for the project to result in cultural resource impacts, based on the extent of ground disturbance and site modification anticipated for the proposed project. Based on this information, the campus shall:

(i) Prepare an inventory of all buildings and structures within the APE that will be 50 years of age or older at the time of project construction for review by a qualified architectural historian. If no structures are present on the site, there would be no impact to historic built environment resources from the project. If potentially historic structures are present, LRDP Mitigation 4.5-1(c) shall be implemented.

(ii) Determine the level of archaeological investigation that is appropriate for the project site and activity, as follows:

- Minimum: excavation less than 18 inches deep and in a relatively small area (e.g., a trench for lawn irrigation, tree planting, etc.). Implement LRDP Mitigation 4.5-1(b)(i).

- Moderate: excavation below 18 inches deep and/or over a large area on any site that has not been characterized and is not suspected to be a likely location for archaeological resources. Implement LRDP Mitigation 4.5-1 (b)(i) and (ii).

- Intensive: excavation below 18 inches and/or over a large area on any site that is within 800 feet of the historic alignment of Putah Creek, or that is adjacent to a recorded archaeological site. Implement LRDP Mitigation 4.5-1 (i), (ii) and (iii).

| 4.5-1(b) | During the planning phase of the project, the campus shall implement the following steps to identify and protect archaeological resources that may be present in the APE:

(i) For project sites at all levels of investigation, contractor crews shall be required to attend an informal training session prior to the start of earth moving, regarding how to recognize archaeological sites and artifacts. In addition, campus employees whose work routinely involves disturbing the soil shall be informed how to recognize evidence of potential archaeological sites and artifacts. Prior to disturbing the soil, contractors shall be notified that they are required to watch for potential archaeological sites and artifacts and to notify the campus if any are found. In the event of a find, the campus shall... |
For project sites requiring a moderate or intensive level of investigation, a surface survey shall be conducted by a qualified archaeologist during project planning and design and prior to soil disturbing activities. For sites requiring moderate investigation, in the event of a surface find, intensive investigation will be implemented, as per item (iii), below. Irrespective of findings, the qualified archaeologist shall, in consultation with the campus, develop an archaeological monitoring plan to be implemented during the construction phase of the project. The frequency and duration of monitoring shall be adjusted in accordance with survey results, the nature of construction activities, and results during the monitoring period. In the event of a discovery, the campus shall implement item (vi), below.

For project sites requiring intensive investigation, irrespective of subsurface finds, the campus shall retain a qualified archaeologist to conduct a subsurface investigation of the project site, to ascertain whether buried archaeological materials are present and, if so, the extent of the deposit relative to the project's area of potential effects. If an archaeological deposit is discovered, the archaeologist will prepare a site record and file it with the California Historical Resource Information System.

If it is determined through step (iii), above, that the resource extends into the project's area of potential effects, the resource will be evaluated by a qualified archaeologist, who will determine whether it qualifies as a historical resource or a unique archaeological resource under the criteria of CEQA Guidelines § 15064.5. If the resource does not qualify, or if no resource is present within the project area of potential effects (APE), this will be noted in the environmental document and no further mitigation is required unless there is a discovery during construction (see (vi), below).

If a resource within the project APE is determined to qualify as an historical resource or a unique archaeological resource (as defined by CEQA), the campus shall consult with the qualified archaeologist to consider means of avoiding or reducing ground disturbance within the site boundaries, including minor modifications of building footprint, landscape modification, the placement of protective fill, the establishment of a preservation easement, or other means that will permit avoidance or substantial preservation in place of the resource. If avoidance or substantial preservation in place is not possible, the campus shall implement LRDP Mitigation 4.5-2(a).

If a resource is discovered during construction (whether or not an archaeologist is present), all soil disturbing work within 100 feet of the find shall cease. The campus shall contact a qualified archaeologist to provide and implement a plan for survey, subsurface investigation as needed to define the deposit, and assessment of the remainder of the site within the project area to determine whether the resource is significant and would be affected by the project. LRDP Mitigation 4.5-1(b), steps (iii) through (vii) shall be implemented.

A written report of the results of investigations will be prepared by a qualified archaeologist and filed with the appropriate Information Center of the California Historical Resources Information System.

For an archaeological site that has been determined by a qualified archaeologist to qualify as an historical resource or a unique archaeological resource through the process set forth under LRDP Mitigation 4.5-1(b), and where it has been determined under LRDP Mitigation 4.5-1(b) that avoidance or preservation in place is not feasible, a qualified archaeologist, in consultation with the campus, shall:

(i) Prepare a research design and archaeological data recovery plan for the recovery that will capture those categories of data for which the site is significant, and implement the data recovery plan prior to or during development of the site.

(ii) Perform appropriate technical analyses, prepare a full written report and file it with the appropriate information center, and provide for the permanent curation of recovered materials.

(iii) If, in the opinion of the qualified archaeologist and in light of the data available, the significance of the site is such that data recovery cannot capture the values that qualify the site for inclusion on the CRHR, the campus shall reconsider project plans in light of the high value of the resource, and implement more substantial modifications to the proposed project that would allow the site to be preserved intact, such as project redesign, placement of fill, or project relocation or abandonment. If no such measures are feasible, the campus shall implement LRDP Mitigation 4.3.3.

If a significant historic resource or unique archaeological resource cannot be preserved intact, before the property is damaged or destroyed the campus shall ensure that the resource is appropriately documented, as follows.

(i) For a built environment feature, appropriate documentation is described under LRDP 4.5-2 (b)

(ii) For an archaeological site, a program of research-directed data recovery shall be conducted and
2003 LRDP EIR Mitigation Measures
CULTURAL RESOURCES

reported, consistent with LRDP Mitigation 4.5-2(a).

4.5-4(a) Implement LRDP Mitigation 4.5-1, 4.5-2 and 4.5-3 to minimize the potential for disturbance or destruction of human remains in an archaeological context and to preserve them in place, if feasible.

4.5-4(b) Provide a representative of the local Native American community an opportunity to monitor any excavation (including archaeological excavation) within the boundaries of a known Native American archaeological site.

4.5-4(c) In the event of a discovery on campus of human bone, suspected human bone, or a burial, all excavation in the vicinity will halt immediately and the area of the find will be protected until a qualified archaeologist determines whether the bone is human. If the qualified archaeologist determines the bone is human, or if a qualified archaeologist is not present, the campus will notify the Yolo or Solano County Coroner (depending on the county of the find) of the find before additional disturbance occurs. Consistent with California Health and Safety Code § 7050.3(b), which prohibits disturbance of human remains uncovered by excavation until the Coroner has made a finding relative to PRC 5097 procedures, the campus will ensure that the remains and vicinity of the find are protected against further disturbance. If it is determined that the find is of Native American origin, the campus will comply with the provisions of PRC § 5097.98 regarding identification and involvement of the Native American Most Likely Descendant (MLD).

4.5-4(d) If human remains cannot be left in place, the campus shall ensure that the qualified archaeologist and the MLD are provided opportunity to confer on archaeological treatment of human remains, and that appropriate studies, as identified through this consultation, are carried out prior to reinterment. The campus shall provide results of all such studies to the local Native American community, and shall provide an opportunity of local Native American involvement in any interpretative reporting. As stipulated by the provisions of the California Native American Graves Protection and Repatriation Act, the campus shall ensure that human remains and associated artifacts recovered from campus projects on state lands are repatriated to the appropriate local tribal group if requested.

4.5-5 Implement LRDP Mitigations 4.5-1 through 4.5-4.

7.5.4 Environmental Checklist and Discussion

<table>
<thead>
<tr>
<th>CULTURAL RESOURCES</th>
<th>Potentially Significant Impact</th>
<th>Less than Significant with Mitigation</th>
<th>Impact for which 2003 LRDP EIR is Sufficient</th>
<th>Less than Significant Impact</th>
<th>No Impact</th>
</tr>
</thead>
<tbody>
<tr>
<td>a) Cause a substantial adverse change in the significance of a historical resource as defined in Section 15064.5?</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☑</td>
</tr>
<tr>
<td>b) Cause a substantial adverse change in the significance of an archaeological resource pursuant to Section 15064.5?</td>
<td>☐</td>
<td>☐</td>
<td>☑</td>
<td>☐</td>
<td>☐</td>
</tr>
<tr>
<td>c) Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☑</td>
</tr>
<tr>
<td>d) Disturb any human remains, including those interred outside of formal cemeteries?</td>
<td>☐</td>
<td>☐</td>
<td>☑</td>
<td>☐</td>
<td>☐</td>
</tr>
</tbody>
</table>

a) The site is vacant; there are no historic resources on the site. No impact would occur.

b) The 2003 LRDP EIR identified that development under the 2003 LRDP could damage or destroy archaeological resources as a result of grading, excavation, ground disturbance or other project development (LRDP Impacts 4.5-1, 4.5-2 and 4.5-3). This risk is highest on campus along the historic banks of the tributaries and slough channels of Putah Creek and in the vicinity of previously discovered archaeological sites. The project site is near the historic Putah Creek channel, which is now the Arboretum Waterway. Pursuant to Mitigation Measure 4.5-1(a), a
qualified archaeologist conducted surface and subsurface testing at the project site: no intact cultural resources were found (Pacific Legacy 2007). Since the project site is within an archaeologically sensitive zone designated pursuant to the 2003 LRDP EIR, archaeological monitoring of the initial and deeper ground-disturbing project construction activities will be conducted to ensure that any potential cultural resources are protected, following the guidelines outlined in Mitigation Measure 4.5-1(b). If any archaeological resources are uncovered as a result of construction activities for the proposed project, Mitigation Measure 4.5-2(a) and 4.5-3 will be implemented to document and protect such resources to the extent possible.

Although impacts to cultural resources (Impact 4.5-3) have been sufficiently addressed in the 2003 LRDP EIR, project-specific impacts will be further evaluated in the project’s Focused Tiered EIR to confirm this finding.

The 2003 LRDP EIR identified that development under the 2003 LRDP would contribute to the cumulative damage to and loss of archaeological resources in Yolo and Solano counties (LRDP Impact 4.5-5). Because any disturbance of native soils involves the potential to result in impacts to archaeological resources, the proposed project could contribute to this impact. Previously adopted LRDP Mitigation Measure 4.5-5, which will be implemented as part of the proposed project, requires the campus to implement the measures discussed above to survey and protect cultural resources. However, the University cannot ensure that other regional jurisdictions would act to protect cultural resources. In addition, it is possible that significant archaeological resources on campus and/or the region could not be protected. Because this impact cannot be fully mitigated, this cumulative impact is considered significant and unavoidable. This impact was adequately analyzed in the 2003 LRDP EIR and was fully addressed in the Findings and Statement of Overriding Considerations adopted by The Regents in connection with its approval of the 2003 LRDP. No conditions have changed and no new information has become available since certification of the 2003 LRDP EIR that would alter this previous analysis.

c) During the course of development at UC Davis, extensive excavation for buildings and infrastructure, and extensive agricultural operations have not revealed the presence of unique paleontological or geological resources. It appears that the campus lacks unique paleontological and geological resources due to the deep alluvial deposition of fairly uniform soil types in the area. No impact would occur, and no additional analysis is required.

d) The 2003 LRDP EIR found the potential for development under the 2003 LRDP to disturb human remains, including those interred outside of formal cemeteries (LRDP Impact 4.5-4). LRDP Mitigation 4.5-4(a-d), included in the proposed project, would ensure that human remains in archaeological and isolated contexts would be protected from destruction that might take place from development through measures including identification, Native American consultation, preservation in place or recovery, respectful treatment and study, and reinterment. Therefore, this impact would be less than significant.

Summary

Mitigation measures 4.5-1(a-b), 4.5-2(a), 4.5-3, 4.5-4(a-d), and 4.5-5 from the 2003 LRDP EIR are relevant to the proposed project and reduce the significance of impacts on cultural resources to the extent feasible. The proposed project would not exceed the levels of significance of cultural resource impacts previously addressed in the 2003 LRDP EIR, nor would it introduce any new significant cultural resource impacts that were not previously addressed.
7.6  Geology, Soils, & Seismicity

7.6.1 Background

Section 4.6 of the 2003 LRDP EIR addresses the geology, soils, and seismicity effects of campus growth under the 2003 LRDP. The following discussion summarizes information presented in the ‘Setting’ subsection of Section 4.6 of the 2003 LRDP EIR.

Campus

The campus is located within the Putah Creek Plain of California’s Great Valley geomorphic province. Except for the somewhat raised elevation along the levee adjacent to Putah Creek, the campus is topographically flat. Soils on campus generally contain a high amount of silt and clay, and as a result, are moderately to slowly permeable and have slow runoff rates, minimal erosion hazards, and moderate to high shrink-swell potential (the potential for soil volume to change with a loss or gain in moisture). The predominant soil constraint to construction on campus is soil shrink-swell potential.

A series of low foothills, including the Dunnigan Hills, the Capay Hills, and the English Hills, lie approximately 20 miles west of the campus at the eastern base of the Coast Range. The presence of subsurface thrust faults within these regional foothills and within 100 miles of the campus indicates the potential for seismic ground shaking in the Davis region. The Davis region is not located within an Alquist-Priolo Fault Zone as defined in the Alquist-Priolo Earthquake Fault Zoning Act, which is designed to prohibit the construction of structures for human occupancy across active faults. According to the California Geological Survey’s Probabilistic Seismic Hazard Assessment for the State of California, the peak ground acceleration with a 10 percent probability of being exceeded in 50 years is 0.2 to 0.3g on the central campus, increasing to 0.3 to 0.4g on the western portion of Russell Ranch (CDOC 1996). By comparison, in most parts of the San Francisco Bay Area, the peak ground acceleration is 0.5g or greater. Likely effects of ground shaking during a probable maximum intensity earthquake for the area could include structural damage to stucco, masonry walls, and chimneys, which could expose people to risks associated with falling objects and potential building collapse.

Project Site

The proposed project site is a flat field with a slight slope to the southeast. A geotechnical study was performed for the project, which recommended over-excavation and compaction based on site soil types and building requirements. The engineering and design process for the project facilities will incorporate the findings from the geotechnical survey to ensure adequate design for compliance with the California Building Code.

7.6.2 2003 LRDP EIR Standards of Significance

The 2003 LRDP EIR considers an impact related to geology, soils, and seismicity significant if growth under the 2003 LRDP would:

- Expose people or structures to potential substantial adverse effects involving strong seismic ground shaking.
- Expose people or structures to potential substantial adverse effects involving seismic-related ground failure.
- Result in substantial soil erosion or the loss of topsoil. (Impacts associated with the effect of erosion on water quality are addressed in Section 7.8 Hydrology & Water Quality.)
- Be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in on- or offsite landslide, lateral spreading, subsidence, liquefaction, or collapse.

- Be located on expansive soil, creating substantial risks to life or property.

- Have soils incapable of adequately supporting the use of septic tanks or alternative wastewater disposal systems where sewers are not available for the disposal of wastewater.

Additional standards from the CEQA Guidelines' Environmental Checklist (a,i) and (a,iv) in the checklist below) were found not applicable to campus growth under the 2003 LRDP.

### 7.6.3 2003 LRDP EIR Impacts and Mitigation Measures

Impacts of campus growth under the 2003 LRDP through 2015-16 related to geology, soils, and seismicity are evaluated in Section 4.6 of the 2003 LRDP EIR. As analyzed in Section 4 of this Initial Study, the proposed project is within the scope of analysis in the 2003 LRDP EIR. No significant impacts identified in the 2003 LRDP EIR related to geology, soils, and seismicity are relevant to the proposed project.

### 7.6.4 Environmental Checklist and Discussion

<table>
<thead>
<tr>
<th>GEOLOGY, SOILS, &amp; SEISMICITY</th>
<th>Potentially Significant Impact</th>
<th>Less than Significant Impact with Mitigation</th>
<th>Impact for which 2003 LRDP EIR is Sufficient</th>
<th>Less than Significant Impact</th>
<th>No Impact</th>
</tr>
</thead>
<tbody>
<tr>
<td>Would the project…</td>
<td></td>
<td></td>
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</tr>
<tr>
<td>a)  Expose people or structures to potential substantial adverse effects, including the risk of loss, injury, or death involving:</td>
<td></td>
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</tr>
<tr>
<td>i)  Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault? Refer to Division of Mines and Geology Special Publication 42.</td>
<td>☐   ☐   ☐   ☐   ☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☑</td>
</tr>
<tr>
<td>ii) Strong seismic ground shaking?</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
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</tr>
<tr>
<td>iii) Seismic-related ground failure, including liquefaction?</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
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<td>☐</td>
</tr>
<tr>
<td>iv) Landslides?</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
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</tr>
<tr>
<td>b) Result in substantial soil erosion or the loss of topsoil?</td>
<td>☐</td>
<td>☐</td>
<td>☑</td>
<td>☐</td>
<td>☐</td>
</tr>
<tr>
<td>c) Be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in on- or offsite landslide, lateral spreading, subsidence, liquefaction or collapse?</td>
<td>☐</td>
<td>☐</td>
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<td>☐</td>
</tr>
<tr>
<td>d) Be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994), creating substantial risks to life or property?</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
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<td>☐</td>
</tr>
</tbody>
</table>
c) Have soils incapable of adequately supporting the use of septic tanks or alternative wastewater disposal systems where sewers are not available for the disposal of wastewater?

☐ ☐ ☐ ☐ ☑

a,i) The UC Davis campus and the surrounding area are not located within an Alquist-Priolo Earthquake Fault Zone, and the closest known active fault rupture zones are over 30 miles away. Therefore, no impact would occur and no further analysis is required.

a,ii) The campus is located in a seismically active area that could experience ground shaking, liquefaction, and settlement. The peak ground acceleration for the main campus is estimated to be 0.2 to 0.3g, and 0.3 to 0.4g on the western portion of Russell Ranch. This intensity of seismic groundshaking has the potential to dislodge objects from shelves and to damage or destroy buildings and other structures. In the case of such a seismic event, people on campus and in the area would be exposed to these hazards.

The campus minimizes hazards associated with damage or destruction to buildings and other structures by reviewing and approving all draft building plans for compliance with the California Building Code (CBC), which includes specific structural seismic safety provisions. The campus also adheres to the University of California Seismic Safety Policy, which requires anchorage for seismic resistance of nonstructural building elements such as furnishings, fixtures, material storage facilities, and utilities that could create a hazard if dislodged during an earthquake. Campus EH&S provides guidance for preparing department-level Illness and Injury Prevention Plans that emphasize methods for minimizing seismic hazards in laboratories, for example, by properly securing chemical containers and gas cylinders. Each campus department has a Safety Coordinator who develops and maintains a departmental emergency response plan. The departmental emergency response plans must be submitted to the Emergency Preparedness Policy Group for annual review to assure consistency with the campus Emergency Operations Plan, which includes seismic safety and building evacuation procedures. The emergency procedures incorporated into the departmental emergency response plans further reduce the hazards from seismic shaking by preparing faculty, staff, and students for emergencies. All of these procedures would be implemented as part of the proposed project. Therefore, the project-level impact associated with risks due to seismic ground shaking would be less than significant. In addition, it is reasonable to assume that all regional jurisdictions would enforce the seismic provisions of the CBC, and therefore the cumulative impact is also considered less than significant.

a,iii) See the discussion in item (c) below.

a,iv) The UC Davis campus and the surrounding area are characterized by flat topography and therefore would not be subject to landslides. No impact would occur and no further analysis is required.

b) The soil types that occur on the UC Davis campus generally, including the project site, contain a high amount of silt and clay, and these soil types have minimal erosion hazard associated with them (see pages 4.6-1,2 and Figure 4.6-1 of the 2003 LRDP EIR). Therefore, this impact was determined to be less than significant in the 2003 LRDP EIR. The relationship between receiving water quality and potential soil erosion as a result of construction activities is addressed in items (a) and (c) in Section 7.8 Hydrology & Water Quality.

c) The potential for liquefaction on the campus is generally low because the depth to groundwater is relatively large (30 to 80 feet, depending on the season). Furthermore, as discussed above for (a,ii), campus policy requires compliance with the CBC and the University of California Seismic Safety Policy, which include structural and nonstructural seismic safety provisions. Complying
with the provisions of the CBC requires that a geotechnical investigation be performed to provide data for the architect and/or engineer to responsibly design the project. A geotechnical study has been performed for the project and the study recommends over-excavation and compaction for building foundation site preparation. Geotechnical investigations address the potential for liquefaction, lateral spreading, and other types of ground failure. Therefore, because the project will comply with the CBC and the University of California Seismic Safety Policy, impacts associated with seismic-related ground failure would be less than significant.

The Davis area subsided by approximately 2 inches between 1999 and 2002. Because the subsidence is regional, unlike local differential settlement, it would not affect building foundations. Subsidence can adversely affect utilities such as storm drains which rely on gradient for gravity-driven flow if the differential subsidence across the length of the pipeline causes the gradient of the pipelines to change direction. On the campus, the differential subsidence is about 0.4 inch per mile. Thus, over a period of 10 years, the gradient of a pipeline could change by as much as 4 inches per mile. Gravity-driven pipelines typically used for wastewater and storm water are designed with gradients between 0.5 and 1 percent (27 to 53 feet drop per mile). Given these gradients, the small potential change of about 4 inches per mile over a period of 10 years would not affect the functioning of existing and proposed storm drains or other utilities.

d) The soils in several areas of the campus have high shrink/swell potential and could, on a site-specific basis, have the potential to create risk to life or property. Campus policy requires compliance with the CBC, which includes provisions for construction on expansive soils such as proper fill selection, moisture control, and compaction during construction. Complying with the provisions of the CBC requires that a geotechnical investigation be performed to provide data for the architect and/or engineer to responsibly design the project. A geotechnical study has been performed for the project and the study recommends over-excavation and compaction for building foundation site preparation. The project will comply with the CBC, which will ensure that this impact is less than significant.

e) The 2003 LRDP EIR identifies that an impact would result if soils are incapable of adequately supporting the use of septic tanks or alternative wastewater disposal systems. No septic tanks or alternative wastewater disposal systems are included in the proposed project, and there would be no impact.

Summary

No LRDP EIR Mitigation Measures from the 2003 LRDP EIR are relevant to the proposed project and reduce the significance of geology, soils, and seismicity impacts to the extent feasible. The proposed project would not exceed the levels of significance of geology, soils, and seismicity impacts previously addressed in the 2003 LRDP EIR, nor would it introduce any new significant impacts that were not previously addressed.
7.7 HAZARDS & HAZARDOUS MATERIALS

7.7.1 Background

Section 4.7 of the 2003 LRDP EIR addresses the hazards and hazardous materials effects of campus growth under the 2003 LRDP. The following discussion summarizes information presented in the 'Setting' subsection of Section 4.7 of the 2003 LRDP EIR.

Campus

A variety of hazardous materials are used on campus during the course of daily operations. Hazardous chemicals used on campus include: chemical solvents, reagents, and aromatic hydrocarbons that are used in campus laboratories; pesticides, fungicides, and herbicides used by agricultural programs and in landscape maintenance; relatively small amounts of solvents, paints, and acids used by fine arts programs; gasoline and diesel fuels, oils and lubricants, antifreeze, cleaning solvents and corrosives, paints and paint thinners, and freon refrigerants used in vehicle and building maintenance. In addition, radioactive materials, biohazardous materials, and laboratory animals are used in teaching and research activities. The use of hazardous materials on campus generates hazardous byproducts that must eventually be handled and disposed of as hazardous wastes.

Generation, transportation, and disposal of hazardous wastes are regulated by various agencies. The lead federal regulatory agency is the Environmental Protection Agency. The State Department of Toxic Substances Control (DTSC) has primary state regulatory responsibility but can delegate enforcement authority to local jurisdictions that enter into agreements with the state agency, as it did with Yolo County Department of Environmental Health (YCDEH) under the Certified Unified Program Agency (CUPA) program.

The campus' Office of Environmental Health and Safety (EH&S) coordinates most local, state, and federal regulatory compliance functions related to the campus’ health, safety, and environmental issues. EH&S performs safety education and training, regulatory interpretation and applicability, approval of potentially hazardous procedures, resolution of safety problems, surveillance, and monitoring. In addition, EH&S provides guidance for several campus safety programs, including: the Chemical Inventory System, which tracks inventory and use of hazardous materials on campus; the CUPA Self-Audit Program, which complies with the terms of an agreement with the YCDEH; development of laboratory-specific Chemical Hygiene Plans; the Radiation and X-Ray Safety Programs; and the Biological Safety Administrative Advisory Committee. EH&S is also a working partner in such campus administrative advisory groups as the Chemical Safety Committee, the Radiation Safety Committees, the Animal Use and Care Committee, and the Biological Safety Committee. External administrative and benchmarking reviews of the EH&S programs are conducted periodically to identify means of further improving the programs. Benchmarking performed by the Campus Safety, Health, and Environmental Management Association (CSHEMA) in 2000 honored the UC Davis EH&S with a “Unique or Innovative Program Award” for its daily on-call program.

Project Site

The campus completed a Phase I Preliminary Site Assessment Due Diligence Report for past use of hazardous materials on the project site (UC Davis Environmental Health & Safety 2007). The assessment found no significant environmental concerns, and no additional assessment is recommended. The survey noted that utility lines on the project site may contain asbestos-containing piping; thus, the survey recommended that prior to any removal and/or relocation of utilities, the piping should be evaluated for asbestos-containing material.
7.7.2 2003 LRDP EIR Standards of Significance

The 2003 LRDP EIR considers a hazards and hazardous materials impact significant if growth under the 2003 LRDP would:

- Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials.
- Create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment.
- Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within ¼ mile of an existing or proposed school.
- Be located on a site that is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, create a significant hazard to the public or the environment.
- For a project within an airport land use plan or, where such a plan has not been adopted, within 2 miles of a public airport or public use airport, result in a safety hazard for people residing or working in the project area.
- Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan.

Additional standards from the CEQA Guidelines’ Environmental Checklist (“f” and “h” in the checklist below) were found not applicable to campus growth under the 2003 LRDP.

7.7.3 2003 LRDP EIR Impacts and Mitigation Measures

Impacts of campus growth under the 2003 LRDP through 2015-16 related to hazards and hazardous materials are evaluated in Section 4.7 of the 2003 LRDP EIR. As analyzed in Section 4 of this Initial Study, the proposed project is within the scope of analysis in the 2003 LRDP EIR. Potentially significant hazards and hazardous materials impacts identified in the 2003 LRDP EIR that are relevant to the proposed project are presented below with their corresponding levels of significance before and after application of mitigation measures identified in the 2003 LRDP EIR. In addition, LRDP Impacts 4.7-1, 4.7-2, 4.7-5, 4.7-6, 4.7-7, 4.7-8, 4.7-9, and 4.7-12, presented below, are considered less than significant prior to mitigation, but the 2003 LRDP EIR identified mitigation to further reduce the significance of these impacts. Less than significant impacts without mitigation measures are not presented here.

<table>
<thead>
<tr>
<th>2003 LRDP EIR Impacts</th>
<th>HAZARDS &amp; HAZARDOUS MATERIALS</th>
<th>Level of Significance Prior to Mitigation</th>
<th>Level of Significance After Mitigation</th>
</tr>
</thead>
<tbody>
<tr>
<td>4.7-1</td>
<td>Implementation of the 2003 LRDP would increase routine hazardous chemical use on campus by UC Davis laboratories and departments and in maintenance and support operations, which would not create significant hazards to the public or the environment.</td>
<td>LS</td>
<td>LS</td>
</tr>
<tr>
<td>4.7-2</td>
<td>Implementation of the 2003 LRDP could increase routine generation of hazardous wastes on campus by UC Davis laboratories and departments and from maintenance and support operations, which would not create significant hazards to the public or the environment.</td>
<td>LS</td>
<td>LS</td>
</tr>
</tbody>
</table>
Mitigation measures in the 2003 LRDP EIR that are applicable to the proposed project are presented below. Since these mitigation measures are already being carried out as part of implementation of the 2003 LRDP, they will not be readopted in this Initial Study. The benefits of these mitigation measures will be achieved independently of considering them as specific mitigation measures of this project. Nothing in this Initial Study in any way alters the obligations of the campus to implement 2003 LRDP EIR mitigation measures.

2003 LRDP EIR Mitigation Measures
HAZARDS & HAZARDOUS MATERIALS

4.7-1 The campus shall continue to implement the same (or equivalent) safety plans, programs, practices, and procedures related to the use, storage, and disposal of hazardous chemical materials during the 2003 LRDP planning horizon, including, but not necessarily limited to, the Business Plan, Hazardous Materials Communication Program, Chemical Inventory System, CUPA Self-Audit program, Injury and Illness Prevention Program, Chemical Hygiene Plans, Medical Surveillance Program, Chemical Safety Advisory Committee, Chemical Carcinogen Safety Program, and EH&SE audits and safety training. These programs may be replaced by other programs that incorporate similar health and safety measures.

4.7-2 Implement LRDP Mitigation 4.7-1.
2003 LRDP EIR Mitigation Measures
HAZARDS & HAZARDOUS MATERIALS

and handling procedures, the waste minimization program, the pretreatment program, and the Waste Exclusion Program. These programs may be subject to modification as more stringent standards are developed or if the programs become obsolete through replacement by other programs that incorporate similar health and safety protection measures.

4.7-3(a) Implement LRDP Mitigation 4.7-1.

4.7-3(b) The campus shall continue to implement the same (or equivalent) Health Physics Program during the 2003 LRDP planning horizon. This program may be subject to modification as more stringent standards are developed or if the program becomes obsolete through replacement by other programs that incorporate similar health and safety protection measures.

4.7-4(a) Implement LRDP Mitigation 4.7-1.

4.7-4(b) Implement LRDP Mitigation 4.7-3 (b).

4.7-4(c) The campus shall continue to implement measures to reduce the generation of radioactive waste, including the requirement that employees working with radioactive materials be trained in radioactive waste minimization, EH&S online information about radioactive waste minimization, and exploration of waste minimization techniques by EH&S staff.

4.7-5(a) Implement LRDP Mitigation 4.7-1.

4.7-5(b) The campus shall continue to implement the same (or equivalent) Biosafety Program during the 2003 LRDP planning horizon. This program may be subject to modification as more stringent standards are developed or if the program becomes obsolete through replacement by other programs that incorporate similar health and safety protection measures.

4.7-6(a) Implement LRDP Mitigation 4.7-1.

4.7-6(b) Implement LRDP Mitigation 4.7-5(b).

4.7-7(a) Implement LRDP Mitigation 4.7-1.

4.7-7(b) Implement LRDP Mitigation 4.7-5(b).

4.7-7(c) The campus shall continue to implement the same (or equivalent) programs related to laboratory animal use during the 2003 LRDP planning horizon, including, but not necessarily limited to, inspections of animal facilities and study areas by the Campus Veterinarian, requiring investigators to prepare Animal Use and Care Protocols, review of Animal Use and Care Protocols by the AUCAAC and EH&S, employee training in animal handling, and the campus animal health program. These programs may be subject to modification as more stringent standards are developed or if the programs become obsolete through replacement by other programs that incorporate similar health and safety protection measures.

4.7-8 The campus shall continue to require that packaging of chemicals to be transported on public roads conform with all legal requirements.

4.7-9 Implement LRDP Mitigations 4.7-1 through 4.7-8.

4.7-12 The campus shall perform due diligence assessments of all sites where ground-disturbing construction is proposed.

4.7-17 To the extent feasible, the campus shall maintain at least one unobstructed lane in both directions on campus roadways. At any time only a single lane is available due to construction-related road closures, the campus shall provide a temporary traffic signal, signal carriers (i.e., flagpersons), or other appropriate traffic controls to allow travel in both directions. If construction activities require the complete closure of a roadway, the campus shall provide appropriate signage indicating alternative routes. To ensure adequate access for emergency vehicles when construction projects would result in temporary lane or roadway closures, the campus shall inform emergency services, including the UC Davis Police and Fire Departments, and American Medical Response, of the closures and alternative travel routes.
### 7.7.4 Environmental Checklist and Discussion

<table>
<thead>
<tr>
<th>Hazards &amp; Hazardous Materials</th>
<th>Potentially Significant Impact</th>
<th>Less than Significant with Mitigation</th>
<th>Impact for which 2003 LRDP EIR is Sufficient</th>
<th>Less than Significant Impact</th>
<th>No Impact</th>
</tr>
</thead>
<tbody>
<tr>
<td>Would the project...</td>
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<td></td>
</tr>
<tr>
<td>a) Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?</td>
<td>☐</td>
<td>☐</td>
<td>☑</td>
<td>☐</td>
<td>☐</td>
</tr>
<tr>
<td>b) Create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment?</td>
<td>☐</td>
<td>☐</td>
<td>☑</td>
<td>☐</td>
<td>☐</td>
</tr>
<tr>
<td>c) Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?</td>
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<td>☐</td>
<td>☑</td>
<td>☐</td>
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</tr>
<tr>
<td>d) Be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, would it create a significant hazard to the public or the environment?</td>
<td>☐</td>
<td>☐</td>
<td>☑</td>
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<tr>
<td>e) For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project result in a safety hazard for people residing or working in the project area?</td>
<td>☐</td>
<td>☐</td>
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<td>☐</td>
</tr>
<tr>
<td>f) For a project within the vicinity of a private airstrip, would the project result in a safety hazard for people residing or working in the project area?</td>
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<td>☐</td>
<td>☑</td>
<td>☐</td>
<td>☐</td>
</tr>
<tr>
<td>g) Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?</td>
<td>☐</td>
<td>☐</td>
<td>☑</td>
<td>☐</td>
<td>☐</td>
</tr>
<tr>
<td>h) Expose people or structures to a significant risk of loss, injury or death involving wildland fires, including where wildlands are adjacent to urbanized areas or where residences are intermixed with wildlands?</td>
<td>☐</td>
<td>☐</td>
<td>☑</td>
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</tr>
</tbody>
</table>

a) The project would use standard construction materials that could include hazardous substances such as gasoline, cements, sealants, paints and solvents. Routine operation and maintenance of the proposed building is not anticipated to require use of products containing hazardous materials other than cleaners or other products for routine maintenance. These products currently are in use on campus, and the amounts associated with use at the project site would be similar to or less than existing operations and maintenance activities.

**Hazardous Chemicals**

The 2003 LRDP EIR found that implementation of the 2003 LRDP would increase routine hazardous chemical use (Impact 4.7-1), routine generation of hazardous chemical wastes (Impact 4.7-2), and routine hazardous materials transport to and from the campus (Impact 4.7-8) by UC Davis laboratories, departments, and maintenance/support operations, which would not create significant hazards to the public or the environment. The campus achieves a high level of compliance with regulatory standards and campus policies relevant to use, transport, and disposal of hazardous materials, as discussed further in the ‘Setting’ subsection to Section 4.7 of the 2003
In accordance with U.S. Department of Transportation regulations, hazardous materials transport on campus is subject to Section 290-65 of the UC Davis Policy & Procedure Manual, which allows materials from the campus storehouses to be transported on campus in campus-owned vehicles. The campus Environmental Health & Safety department oversees the transport of hazardous waste and manages hazardous waste at the campus Environmental Services Facility prior to shipment for off-site disposal. Hazardous waste treatment, storage, and disposal facilities currently have available capacity to accept and safely manage UC Davis chemical waste. The campus will continue to implement relevant safety programs and meet relevant standards regarding hazardous materials use, transport, and waste management for the proposed project, as well as for other projects proposed under the 2003 LRDP. Therefore, these project-level impacts would be less than significant. To ensure that safety policies continue to be implemented and to further reduce the significance of these impacts, LRDP Mitigations 4.7-1, 4.7-2(a-b), and 4.7-8 are included as part of the proposed project.

Given the campus’ and local jurisdiction’s existing policies and compliance with state and federal regulations, the 2003 LRDP EIR found that cumulative impacts related to the use and transport of hazardous materials and the generation of hazardous waste are less than significant.

Radioactive Materials

The proposed project would not increase use (Impact 4.7-3) or generation (Impact 4.7-4) of radioactive materials on campus, because existing research programs on campus would be moved into the proposed new facility. Some of the research programs that would move to this proposed facility do currently use radioactive materials and would continue to use radioactive materials. The campus will continue to implement relevant safety programs and meet relevant standards regarding radioactive materials use and generation for the proposed project, as well as for other projects proposed under the 2003 LRDP. Therefore, these project-level impacts would be less than significant. To ensure that safety policies continue to be implemented and to further reduce the significance of these impacts, LRDP Mitigations 4.7-3(a-b) and 4.7-4(a-c) will be implemented as part of the proposed project.

Biohazardous Materials

The proposed project would result in the use of biohazardous materials and the generation of biohazardous waste related to the biosafety level 3 (BSL3) laboratory suite that would be constructed as part of the project. Approximately 495 asf of BSL3 space would be constructed, out of approximately 27,000 asf of research laboratory space (with a total of 76,100 asf for all space types in the proposed building). The BSL3 laboratory suite would be provided to meet containment and operational requirements for research involving potentially infectious agents, as described in Section 3 (Project Description), of this Initial Study.

The 2003 LRDP EIR found that implementation of the 2003 LRDP would increase routine use of biohazardous materials (LRDP Impact 4.7-5) and routine generation of biohazardous waste (LRDP Impact 4.7-6) by UC Davis laboratories, departments, and maintenance/support operations, which would not create significant hazards to the public or the environment. The campus achieves a high level of compliance with regulatory standards and campus policies relevant to use, transport, and disposal of biohazardous materials, as discussed further in the ‘Setting’ subsection to Section 4.7 of the 2003 LRDP EIR.

Transport, use, generation, and disposal of biohazardous materials at UC Davis would increase as a result of the proposed project. The potential impact of this increased use on employee health, the public, and the environment is considered less than significant because, as explained in more detail below, regulatory requirements and the current campus guidelines and practices for
controlling employee exposures to infectious agents would be followed, which would also minimize the potential impacts to the public from biohazardous materials used in the proposed research facilities.

To ensure that laboratory workers do not carry pathogens out of the laboratory on their skin or clothing, campus policy and CDC guidelines for BSL-3 laboratories require that workers wear protective clothing; the used clothing is removed in a gown-out area and decontaminated in an autoclave before re-use or disposal. BSL-3 laboratories must also have a sink for hand washing near the exit; depending on the risk involved, workers may also be required to shower after exiting the laboratory and before entering the changing room where they change into their street clothing. Furthermore, the quantities of infectious organisms handled in the proposed BSL 3 laboratory would be relatively small compared, for example, to a laboratory growing virus for vaccines. The anticipated use of the BSL3 space in the proposed facility would involve mainly cell and virus culture, in very small quantities.

Laboratory equipment that could generate aerosols, such as shakers and centrifuges, would be sealed or contained during use at the project site. To contain potential aerosol emissions all manipulations involving cultures are performed in a biosafety cabinet. Given the small quantities of infectious organisms handled in the laboratory and the controls on aerosol releases, the potential that any aerosols would be released from the laboratory carrying pathogens in sufficient quantities to reach an animal or a person outside the laboratory and cause disease, would be extremely low and would be further reduced by the negative airflow into the BSL 3 rooms, HEPA filtering, and the practices for materials and people exiting the facility.

Engineering controls and laboratory practices that would be implemented in compliance with UC Davis policy and federal and state regulations would minimize the potential for an accidental release of aerosols containing pathogens. Current CDC guidelines and campus policies require that BSL-3 research activities must be conducted in biosafety cabinets, which contain aerosols and filter all released air to remove biohazardous materials. The project includes HEPA air filtration. HEPA-filtered ventilation systems and biological safety cabinets are tested and certified annually by an external contractor or by specially trained campus Operations and Maintenance personnel and EH&S retains records of these tests. Most HEPA filters for biosafety cabinets recirculate air into laboratories and must achieve a minimum efficiency of 99.97 percent in screening out particles at 0.3 micron in size (DOE 1997). Most airborne viruses are smaller than 0.3 micron; however, they do not usually travel alone but on a host bacterium, water droplet, or dust particle, which HEPA filters very effectively remove. As particle size increases above 0.3 micron in size, collection in the HEPA filter becomes more efficient as the greater particle mass increases collection by interception by the filter media or impaction on the filter media. HEPA filter particle removal efficiency does not decrease greatly for particle sizes below 0.3 micron, and for particle sizes significantly smaller (about 0.1 micron and less), collection efficiency is actually better than for 0.3-micron particles (Lee and Liu 1980). Therefore, HEPA filters effectively remove biohazardous particles. Filters are chemically decontaminated before they are removed for disposal.

The following measures would further ensure that infectious agents would not escape the laboratory. The proposed project also includes cascading and constantly maintained negative pressure from the entry door to the central clean corridor to the preparation rooms to the procedure rooms. All air flow into the laboratory is single-pass, not recirculated into the lab or to any other part of the building. Furthermore, all joints in the walls, floors, and ceilings would be sealed. Design, construction, and operation of the BSL 3 facility would include a detailed commissioning process with review by a commissioning agent experienced in the commissioning of BSL 3 facilities.
Solid biohazardous waste generated at the proposed laboratory, including specimens, workers’
disposable protective clothing and sharp objects such as needles, scalpels, and broken glass,
would be treated in an autoclave before it leaves the laboratory. Liquid wastes would be treated
with household bleach or other appropriate decontaminant. Once treated, liquid waste would be
considered non-hazardous waste (unless it also contains hazardous chemicals) and would be sent
to the campus wastewater treatment plant or held for pickup by EH&S if it contains hazardous
chemicals. Hazardous waste disposal of autoclaved materials would take place in conformance
with applicable regulations for the transport and disposal of medical waste which could include
transport to an authorized medical waste treatment facility. The project also incorporates
elements to ensure that the pathogens held in the BSL 3 facilities are secure. Access to the BSL 3
facilities would be controlled by a card reader for authorized staff only. Therefore, the potential
hazard of unauthorized persons accessing the laboratories would be less than significant. Based
on these factors, the transport, use, and disposal of biohazardous materials would be similar to the
activities evaluated in the 2003 LRDP EIR and the potential impact would remain less than
significant.

Biohazardous waste generated at the proposed laboratory, including specimens, workers’
disposable protective clothing and sharp objects such as needles, scalpels, and broken glass,
would be treated in an autoclave or approved bleaching solution before it leaves the laboratory.
Once treated, the waste would be considered non-hazardous waste (unless it also contains
hazardous chemicals) and would be sent to the campus landfill or the campus wastewater
treatment plant. Hazardous waste disposal of autoclaved materials would take place in
conformance with applicable regulations for the transport and disposal of hazardous waste which
could include transport to an authorized hazardous waste landfill. The project also incorporates
elements to ensure that the pathogens held in the BSL 3 facilities are secure. Access to the BSL 3
facilities would be controlled by a card reader for authorized staff only. Therefore, the potential
hazard of unauthorized persons accessing the laboratories would be less than significant. Based
on these factors, the transport, use, and disposal of biohazardous materials would be similar to the
activities evaluated in the 2003 LRDP EIR and the potential impact would remain less than
significant.

The potential impacts of increasing the use of biohazardous materials at UC Davis on employee
health, the public, and the environment is considered less than significant because regulatory
requirements and the current campus guidelines and practices for controlling employee exposures
to infectious agents would be followed, which would also minimize impacts outside of the
research laboratories. Previously adopted LRDP Mitigations 4.7-5(a) and (b) and 4.7-6 (a) and
(b) will be implemented as part of the proposed project and would ensure that safety policies
continue to be implemented to further reduce the significance of these impacts.

Given the campus’ and local jurisdiction’s existing policies and compliance with state and federal
regulations, the 2003 LRDP EIR finds that cumulative impacts related to the use and transport of
biohazardous materials and the generation of biohazardous waste are less than significant.

Laboratory Animals

The proposed project would build approximately 1,500 asf of finished rodent vivarium space,
which is intended to accommodate existing research animals. Approximately 2,000 asf of “shell”
space would also be built that could later be finished as vivarium space to accommodate
additional laboratory rodents, as necessary. The shell space is intended to provide flexibility to
the research programs that would be housed in the building, and could be used for storage space
or other program support functions not related to laboratory animals. The 2003 LRDP EIR found
that implementation of the 2003 LRDP could increase routine use of laboratory animals on
campus by UC Davis laboratories, which would not significantly increase risk of animal bites,
escapes, and disease transmission (Impact 4.7-7). Compliance with existing animal use and care protocols, along with oversight by the Campus Veterinarian would continue for the proposed project, minimizing risk of animal bites, escapes, and disease transmission. Therefore, this impact is considered less than significant. To ensure continued compliance with relevant laws and campus policies and to further reduce this less-than-significant impact, previously adopted LRDP Mitigation 4.7-7(a-c) will be implemented as part of the project.

b) The 2003 LRDP EIR found that implementation of the 2003 LRDP would not create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment (Impact 4.7-9). Compliance with all applicable federal and state laws, as well as campus programs, practices, and procedures related to the transportation, storage, and use of hazardous materials, would continue for the proposed project as well as other projects proposed under the 2003 LRDP, minimizing the potential for an accidental release of hazardous materials and providing for prompt and effective cleanup if an accidental release occurs. Therefore, this impact is considered less than significant. To ensure continued compliance with relevant laws and campus policies and to further reduce this less-than-significant impact, the LRDP Mitigation 4.7-9 will be implemented as part of the project.

c) Existing schools within ¼ mile of campus include Martin Luther King High School on B Street in downtown Davis; Emerson Junior High School on Calaveras Avenue; Rivendell Nursery School; Parkside Children’s House (formerly Davis Montessori School); Redbud Montessori School north of the west campus; the Grace Valley Christian Academy on County Road 98; and the Fairfield Elementary School on Russell Boulevard at County Road 96. There are no proposed new Davis Joint Unified School District (DJUSD) school sites within ¼ mile of the campus boundaries. The future west campus neighborhood is planned to include DJUSD elementary and high school facilities on the campus. Childcare centers are currently located on the campus. None of these schools or childcare facilities are located within ¼ mile of the proposed project site.

Although hazardous materials associated with the proposed project could be handled within ¼ mile of existing and proposed schools and childcare centers, these materials would not be handled in quantities sufficient to pose a risk to occupants of the schools or to members of the campus and surrounding community. The potential consequences of an accidental release would be limited to the individual laboratory where the spill occurred, and people outside the buildings would not be exposed. As described above in item a), containment safeguards would be designed into the laboratory space, including BSL3 space, to minimize potential of accidental release of biohazardous materials. Therefore, the impact to those attending existing or proposed schools would be less than significant.

d) The Laboratory for Energy Related Research/South Campus Disposal site is the only campus site that is listed as a hazardous materials site pursuant to Government Code Section 65962.5. The proposed project would not disturb this site.

The 2003 LRDP EIR found that construction activities under the 2003 LRDP would not expose construction workers and campus occupants to contaminated soil or groundwater (Impact 4.7-12). Campus policy requires that due diligence surveys be performed for all proposed project sites as part of the project planning process. The campus completed a Phase I Preliminary Site Assessment Due Diligence Report for the project site (Pfohl 2007). The assessment found no significant environmental concerns, and no additional assessment is recommended. The survey noted that utility lines on the project site may contain asbestos-containing piping; thus, the survey recommended that prior to any removal and/or relocation of utilities the piping be evaluated for asbestos-containing material. The proposed project would comply with this survey recommendation. Federal and state regulations require that workers who may be exposed to
contaminants during the course of their jobs know of the presence of contamination and be properly trained. In addition, these regulations require that appropriate engineering and administrative controls and protective equipment be provided to reduce exposure to safe levels. Current campus due diligence policy and Cal/OSHA regulations minimize the exposure of construction workers to contaminants. In addition, if contaminants are identified on project sites, the campus would coordinate site remediation. Therefore, the impact would be less than significant. To ensure that due diligence surveys are performed and to further reduce this less-than-significant impact, LRDP Mitigation 4.7-12 has been implemented as part of the proposed project.

e) The project is approximately 1.3 miles from the University Airport. The 2003 LRDP EIR found that development of certain projects on the west campus under the 2003 LRDP could result in safety hazards associated with aircraft. However, the proposed project is not one of these projects and would not conflict with airport operations. Therefore, the impact would be less than significant.

f) The University Airport is a public use airport, not a private airstrip. No other airport facilities are within the immediate vicinity of the campus. No impact would occur. Refer to item e) above for a discussion of potential safety hazards associated with the University airport, a local public use airport.

g) The 2003 LRDP EIR found that implementation of the 2003 LRDP could interfere with the campus' Emergency Operations Plan through construction-related road closures (Impact 4.7-17). The project likely would require intermittent road closures on Dairy Road, La Rue Road, and Garrod Drive during utility line installation, project construction (for construction material and equipment deliveries), and the possible realignment of Garrod Road. Under current campus procedures, if there are changes in traffic patterns resulting from construction lane or roadway closures, the UC Davis Office of Architects and Engineers initiates notification of emergency services, including the UC Davis Fire Department and Police Department, and American Medical Response, which provides regional ambulance services to the campus. In addition, to ensure that the proposed project would not impair implementation of or physically interfere with emergency response and evacuation efforts, LRDP Mitigation 4.7-17, which requires the campus to keep at least one lane open in both directions to the extent feasible, will be included as part of the proposed project. No other potential impacts associated with interference of an adopted emergency response plan or emergency evacuation plan would occur.

h) Areas along Putah Creek are the only areas on campus that could be susceptible to wildland fires. Urbanization will not occur in close proximity to these areas under the 2003 LRDP because land along Putah Creek is designated for Open Space and Teaching and Research Fields, and land adjacent to these open areas is designated primarily for Teaching and Research Fields and low density development. The project site is surrounded on three sides by development located at a distance from Putah Creek. Therefore, no impact would occur.

Summary

Mitigation measures 4.7-1, 4.7-2(a-b), 4.7-3(a-b), 4.7-4(a-c), 4.7-5(a-b), 4.7-6(a-b), 4.7-7(a-c), 4.7-8, 4.7-9, and 4.7-12 from the 2003 LRDP EIR are relevant to the proposed project and reduce the significance of hazards and hazardous materials impacts to the extent feasible. The proposed project would not exceed the levels of significance of hazards and hazardous materials impacts previously addressed in the 2003 LRDP EIR, nor would it introduce any new significant hazards and hazardous materials impacts that were not previously addressed.
7.8 HYDROLOGY & WATER QUALITY

7.8.1 Background

Section 4.8 of the 2003 LRDP EIR addresses the hydrology and water quality effects of campus growth under the 2003 LRDP. The following discussion summarizes information presented in the ‘Setting’ subsection of Section 4.8 of the 2003 LRDP EIR.

Campus

Surface Water Resources

The UC Davis campus is located in the Lower Sacramento watershed. Putah Creek, the principal waterway in the Davis area, originates from springs in the Mayacamas Mountains northwest of the campus, flows into Lake Berryessa, through Winters, along the southern boundary of Russell Ranch, along the southern boundary of UC Davis’ west and south campuses, and eventually into the Yolo Bypass, an overflow channel for the Sacramento River. The North Fork Cutoff and the Arboretum Waterway on campus follow the historic channel of Putah Creek, but currently have no natural flow. The North Fork Cutoff is a typically dry stream channel on the west campus that is currently occupied by sheep and cattle programs in the Department of Animal Science. The Arboretum Waterway serves as the storm water detention basin for the central campus.

UC Davis is a member of the Solano Project, and currently has rights to purchase 4,000 acre-feet of Putah Creek water from Lake Berryessa per year, although reductions in deliveries can occur during drought conditions. The water is delivered to the southwest corner of the campus via an underground pipeline. UC Davis also has rights to surface water from Putah and Cache Creeks. The campus has not used this water in the recent past, but the tenant farmer at Russell Ranch uses approximately 3,750 acre-feet of water per year from Putah and Cache Creeks (via Willow Canal) for irrigation of commercial crops.

The quantity and quality of flows in Putah Creek are highly variable and depend on releases from Lake Berryessa, precipitation, storm water runoff, and treated effluent discharge. The campus’ tertiary level Wastewater Treatment Plant (WWTP) is the largest discharger of treated effluent to Putah Creek. The plant is regulated under a National Pollutant Discharge Elimination System (NPDES) Waste Discharge Requirement (WDR) permit issued by the Central Valley Regional Water Quality Control Board (CVRWQCB).

Groundwater Resources

The campus is underlain by sand and gravel alluvial deposits that include deep and shallow/intermediate depth aquifers. Deep gravel and sand aquifers underlie the campus between 600 to 1,500 feet below ground surface and supply the campus domestic/fire system. Historic annual domestic water use on campus over the past three decades has ranged from less than 600 million gallons per year (mgy) during drought conditions to nearly 900 mgy (UC Davis 1997). Despite the campus’ significant growth in recent decades, the campus’ deep aquifer demands have not significantly increased since the late 1960s (Ludorff and Scalmanini 2003), a trend that reflects the success of the campus’ water conservation efforts.

Shallow/intermediate depth sand and gravel aquifers underlie the campus at depths from 150 to 800 feet below ground surface and supply the campus utility water system, main campus agricultural water needs, and campus and tenant farmer irrigation needs at Russell Ranch. Over the past ten years, an average of approximately 2,657 acre-feet per year of shallow/intermediate aquifer water was used.
for agricultural purposes on campus, including approximately 1,813 acre-feet on the main campus and approximately 844 acre-feet at Russell Ranch (UC Davis Agricultural Services 2003, UC Davis ORMP 2003c). Water levels in the shallow/intermediate aquifer vary seasonally and strongly correlate to precipitation. A generally upward recharge trend over the period from 1957 to 2002 indicates that there has not been long-term overdraft of the shallow/intermediate depth aquifers (Ludorff and Scalmanini 2003).

Regional groundwater quality is generally characterized as having high mineral content. Calcium, magnesium, and sulfates have been identified as the dominant problematic constituents.

**Flooding & Drainage**

On campus, the South Fork of Putah Creek, the North Fork Cutoff, and the Arboretum Waterway channels are designated as FEMA 100-year floodplain areas. In addition, a portion of Russell Ranch along County Road 31 and a portion of the west campus along County Road 98 are also subject to flooding during a 100-year storm event.

The central campus drainage system intercepts and collects runoff and directs this water via underground pipes to the Arboretum Waterway. During large storm events, water rises in the Arboretum Waterway, overtops the weir at the west end of the waterway, and flows into the pump pond located north of the weir. From the pump pond, water is pumped through an underground storm drain to the South Fork of Putah Creek. The peak discharge from the Arboretum Waterway to Putah Creek since December 1999 was 65 cubic feet per second (cfs). The majority of land in the west and south campuses and at Russell Ranch is used as teaching and research fields and is not drained by a storm drainage system. Irrigation practices on campus teaching and research fields typically do not generate surface runoff. However, large storm events may result in shallow overland flows that flow to temporary shallow ponds in places such as road and field edges. In addition, developed areas on the west and south campuses include storm water conveyance systems that drain to Putah Creek.

To protect the quality of storm water on campus that ultimately drains to Putah Creek, UC Davis construction and industrial activities are subject to the NPDES storm water requirements. Routine maintenance and minor construction activities on campus are subject to the campus’ Phase II Storm Water Management Plan (SWMP).

**Project Site**

The project site is approximately 1,000 feet from the Arboretum Waterway and approximately 800 feet from the Arboretum. The site is currently managed for weed control and is mainly covered in non-native grasses and forbs. A stormwater pipe runs north-south under a portion of the site, and there are 3 existing storm drain inlets on the southern portion of the site. Storm water runoff from the site drains to these inlets or via sheet flow to roadway storm water collection gutters, and from there to the Arboretum Waterway, which ultimately discharges to the south fork of Putah Creek.

**7.8.2 2003 LRDP EIR Standards of Significance**

The 2003 LRDP EIR considers a hydrology and water quality impact significant if growth under the 2003 LRDP would:

- Violate any water quality standards or waste discharge requirements.
- Substantially deplete groundwater supplies or interfere substantially with groundwater recharge such that there would be a net deficit in aquifer volume or a lowering of the local groundwater table level.
- Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, in a manner which would result in substantial erosion or siltation on site or off site.
- Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, or substantially increase the rate or amount of surface runoff in a manner which would result in flooding on site or off site.
- Create or contribute runoff water that would exceed the capacity of existing or planned storm water drainage systems or provide substantial additional sources of polluted runoff.
- Otherwise substantially degrade water quality.
- Place within a 100-year flood hazard area structures that would impede or redirect flood flows.
- Expose people or structures to a significant risk of loss, injury, or death involving flooding.

Additional standards from the CEQA Guidelines' Environmental Checklist (“g” and “j” in the checklist below) were found not applicable to campus growth under the 2003 LRDP.

### 7.8.3 2003 LRDP EIR Impacts and Mitigation Measures

Impacts of campus growth under the 2003 LRDP through 2015-16 on hydrology and water quality are evaluated in Section 4.8 of the 2003 LRDP EIR. As analyzed in Section 4 of this Initial Study, the proposed project is within the scope of analysis in the 2003 LRDP EIR. Significant and potentially significant hydrology and water quality impacts identified in the 2003 LRDP EIR that are relevant to the proposed project are presented below with their corresponding levels of significance before and after application of mitigation measures identified in the 2003 LRDP EIR. In addition, Impact 4.8-1, presented below, is considered less than significant prior to mitigation, but mitigation measures were identified in the 2003 LRDP EIR to further reduce the significance of this impact. Other less than significant impacts that do not include mitigation measures are not presented here. Mitigation measures are included to reduce the magnitude of project-level impacts 4.8-5 and 4.8-6 and cumulative impacts 4.8-13 and 4.8-14, but these impacts are identified as significant and unavoidable because they cannot be fully mitigated. Mitigation is also relevant to reduce the magnitude of cumulative impact 4.8-10, but this impact is identified as significant and unavoidable because mitigation falls within other jurisdictions to enforce and monitor and therefore cannot be guaranteed by the University of California.

<table>
<thead>
<tr>
<th>2003 LRDP EIR Impacts</th>
<th>Level of Significance Prior to Mitigation</th>
<th>Level of Significance After Mitigation</th>
</tr>
</thead>
<tbody>
<tr>
<td>HYDROLOGY &amp; WATER QUALITY</td>
<td></td>
<td></td>
</tr>
<tr>
<td>4.8-1 Campus construction activities associated with implementation of the 2003 LRDP would not contribute substantial loads of sediment or other pollutants in storm water runoff that could degrade receiving water quality.</td>
<td>LS</td>
<td>LS</td>
</tr>
<tr>
<td>4.8-2 Development under the 2003 LRDP would increase impervious surface on the campus and could alter drainage patterns, thereby increasing runoff and loads of pollutants in storm water, which could affect water quality.</td>
<td>PS</td>
<td>LS</td>
</tr>
<tr>
<td>4.8-3 Implementation of the 2003 LRDP could alter drainage patterns in the project area and increase impervious surfaces, which could exceed the capacity of</td>
<td>PS</td>
<td>LS</td>
</tr>
<tr>
<td>2003 LRDP EIR Impacts</td>
<td>Level of Significance Prior to Mitigation</td>
<td>Level of Significance After Mitigation</td>
</tr>
<tr>
<td>-----------------------</td>
<td>------------------------------------------</td>
<td>---------------------------------------</td>
</tr>
<tr>
<td>HYDROLOGY &amp; WATER QUALITY</td>
<td></td>
<td></td>
</tr>
<tr>
<td>storm water drainage systems and result in localized flooding and contribution to offsite flooding.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>4.8-4 Campus growth under the 2003 LRDP would increase discharge of treated effluent from the campus wastewater treatment plant into the South Fork of Putah Creek, which could exceed waste discharge requirements and degrade receiving water quality.</td>
<td>PS</td>
<td>LS</td>
</tr>
<tr>
<td>4.8-5 Campus growth under the 2003 LRDP would increase the amount of water extracted from the deep aquifer and would increase impervious surfaces. This could result in a net deficit in the deep aquifer volume or a lowering of the local groundwater table but would not interfere substantially with recharge of the deep aquifer.</td>
<td>S</td>
<td>SU</td>
</tr>
<tr>
<td>4.8-6 Campus growth under the 2003 LRDP could increase the amount of water extracted from the shallow/intermediate aquifer and would increase impervious surfaces. Extraction from the shallow/intermediate aquifer could deplete groundwater levels and could contribute to local subsidence, and increased impervious coverage could interfere substantially with recharge. This could result in a net deficit in the intermediate aquifer volume or a lowering of the local groundwater table.</td>
<td>SU</td>
<td>SU</td>
</tr>
<tr>
<td>4.8-10 Development under the 2003 LRDP, in conjunction with construction activities, increased impervious surfaces, and alterations to drainage patterns associated with other development in the region that would increase impervious surface coverage in the watershed, could increase storm water runoff, and could provide substantial sources of polluted runoff, which could affect receiving water quality.</td>
<td>S</td>
<td>SU</td>
</tr>
<tr>
<td>4.8-11 Implementation of the 2003 LRDP in combination with regional development could alter drainage patterns and increase the rate or amount of surface runoff, which could exceed the capacity of storm water drainage systems and result in flooding within the Putah Creek watershed.</td>
<td>PS</td>
<td>LS</td>
</tr>
<tr>
<td>4.8-12 Growth under the 2003 LRDP and other development in the region would increase discharge of treated effluent to the Putah Creek watershed, which could degrade receiving water quality.</td>
<td>PS</td>
<td>LS</td>
</tr>
<tr>
<td>4.8-13 Growth under the 2003 LRDP and other development in the region would increase the amount of water extracted from the deep aquifer and increase impervious surfaces. This could result in a net deficit in the deep aquifer volume or a lowering of the local groundwater table but would not interfere substantially with recharge of the deep aquifer.</td>
<td>S</td>
<td>SU</td>
</tr>
<tr>
<td>4.8-14 Growth under the 2003 LRDP and other development in the region would increase the amount of water extracted from shallow/intermediate aquifers and increase impervious surfaces. This could contribute to local subsidence, substantially deplete groundwater supplies, and could interfere substantially with recharge of the shallow/intermediate depth aquifer, resulting in a net deficit in the shallow/intermediate aquifer volume or a lowering of the local groundwater table.</td>
<td>S</td>
<td>SU</td>
</tr>
</tbody>
</table>

Levels of Significance: LS=Less than Significant, S=Significant, PS=Potentially Significant, SU=Significant and Unavoidable

Mitigation measures in the 2003 LRDP EIR that are applicable to the proposed project are presented below. Since these mitigation measures are already being carried out as part of implementation of the 2003 LRDP, they will not be readopted in this Initial Study. The benefits of these mitigation measures will be achieved independently of considering them as specific mitigation measures of this project. Nothing in this Initial Study in any way alters the obligations of the campus to implement 2003 LRDP EIR mitigation measures.
2003 LRDP EIR Mitigation Measures
HYDROLOGY & WATER QUALITY

4.8-1 The campus shall continue to comply with the NPDES state-wide General Permit for Discharge of Storm Water Associated with Construction Activity by implementing control measures and BMPs required by project-specific SWPPPs and with the Phase II SWMP to eliminate or reduce non-storm and storm water discharges to receiving waters.

4.8-2 The campus shall comply with the measures in the Phase II SWMP to ensure that project design includes a combination of BMPs, or equally effective measures as they become available in the future, to minimize the contribution of pollutants to receiving waters.

4.8-3(a) Prior to approval of specific projects under the 2003 LRDP, the campus shall perform a drainage study to evaluate each specific development to determine whether project runoff would exceed the capacity of the existing storm drainage system, cause ponding to worsen, and/or increase the potential for property damage from flooding.

4.8-3(b) If it is determined that existing drainage capacity would be exceeded, ponding could worsen, and/or risk of property damage from flooding could increase, the campus shall design and implement necessary and feasible improvements. Such improvements could include, but would not be limited to, the following:

(i) The expansion or modification of the existing storm drainage system.

(ii) Single-project detention or retention basins incorporated into project design with features including but not limited to: small onsite detention or retention basins; rooftop ponding; temporary flooding of parking areas, streets and gutters; landscaping designed to temporarily retain water; and gravel beds designed to collect and retain runoff.

(iii) Multi-project storm water detention or retention basins.

4.8-4(a) The campus shall continue to monitor and modify its pretreatment program, WWTP operation, and/or treatment processes as necessary to comply with WDRs.

4.8-4(b) The campus shall implement a monitoring program specifically targeted at the following constituents: copper, cyanide, iron and nitrate + nitrite, and make appropriate modifications as necessary to the campus pretreatment program to avoid exceedance of permit limits for these constituents.

4.8-5(a) The campus shall continue to implement water conservation strategies to reduce demand for water from the deep aquifer. Domestic water conservation strategies shall include the following or equivalent measures:

(i) Install water efficient shower heads and low-flow toilets that meet or exceed building code conservation requirements in all new campus buildings, and where feasible, retrofit existing buildings with these water efficient devices.

(ii) Continue the leak detection and repair program.

(iii) Continue converting existing single-pass cooling systems to cooling tower systems.

(iv) Use water-conservative landscaping on the west and south campuses where domestic water is used for irrigation.

(v) Replace domestic water irrigation systems on the west and south campuses with an alternate water source (shallow/intermediate or reclaimed water), where feasible.

(vi) Install water meters at the proposed neighborhood to encourage residential water conservation.

(vii) Identify and implement additional feasible water conservation strategies and programs including a water awareness program focused on water conservation.

4.8-5(b) The campus shall continue hydrogeologic monitoring and evaluation efforts to determine the long-term production and quality trends of the deep aquifer.

4.8-5(c) To the extent feasible, new water supply wells in the deep aquifer should be located on the west campus in sands and gravels that are not used by or available to the City of Davis for deep water extraction.

4.8-5(d) If continued hydrogeologic monitoring and evaluation efforts identify constraints in the deep aquifer's ability to provide for the campus long-term water needs, the campus will treat shallow/intermediate aquifer and/or surface water from the Solano Project to serve domestic water demand.

4.8-6(a) The campus shall continue to implement water conservation strategies to reduce demand for water from the
intermediate aquifer. Utility water conservation strategies shall include the following or equivalent measures:

(i) Landscape, where appropriate, with native, drought resistant plants and use lawns only where needed for pedestrian traffic, activity areas, and recreation.

(ii) Install efficient irrigation systems including centrally controlled automatic irrigation systems and low-flow spray systems.

(iii) Apply heavy applications of mulch to landscaped areas to reduce evaporation

(iv) Use treated wastewater for landscape irrigation where feasible.

4.8-6(b) The campus shall continue to monitor shallow/intermediate aquifer water elevations at existing campus wells to ascertain whether there is any long-term decline in water levels.

4.8-6(c) The campus shall continue to participate in regional subsidence monitoring, including by installing an extensometer, to determine the vertical location of local subsidence.

4.8-6(d) If shallow/intermediate aquifer monitoring or subsidence monitoring indicate that campus water use from the intermediate aquifer is contributing to a net deficit in aquifer volume and/or significant subsidence, the campus will reduce use of water from the aquifer by using surface water and/or treated wastewater effluent to irrigate campus recreation fields.

4.8-6(e) The campus shall incorporate the following or equally effective measures into project designs under the 2003 LRDP where feasible, to increase percolation and infiltration of precipitation into the underlying shallow/intermediate aquifers:

(i) Minimize paved surfaces.

(ii) Use grassy swales, infiltration trenches, or grass filter strips to intercept storm water runoff.

(iii) Implement LRDP Mitigation 4.8-3(b), which specifies construction of detention and infiltration facilities in those areas that do not discharge storm water to the Arboretum.

4.8-10(a) Implement LRDP Mitigation 4.8-1 and 4.8-2.

4.8-10(b) Jurisdictions within the Putah Creek watershed should comply with Phase II NPDES Municipal Storm Water Permit requirements for small municipalities in order to minimize the contribution of sediment and other pollutants associated with development in the region.

4.8-10(c) Comprehensive SWPPPs and monitoring programs should be implemented by all storm water dischargers associated with specified industrial and construction activities, in compliance with the state's General Permits. Such plans shall include BMPs or equally effective measures.

4.8-11 The campus shall implement LRDP Mitigation 4.8-3(a-c) in order to prevent flooding on campus.

4.8-12 The campus shall implement LRDP Mitigation 4.8-4(a) and (b) to minimize the potential for degradation of receiving water quality.

4.8-13(a) Implement LRDP Mitigation 4.8-5(a-d).

4.8-13(b) The City of Davis is expected to implement measures to reduce the amount of water withdrawn from the deep aquifer consistent with policies adopted in its General Plan.

- Give priority to demand reduction and conservation over additional water resource development (Policy WATER 1.1)
- Require water conserving landscaping (Policy WATER 1.2)
- Provide for the current and long-range water needs of the Davis Planning Area, and for protection of the quality and quantity of groundwater resources (Policy WATER 2.1)
- Manage groundwater resources so as to preserve both quantity and quality (Policy WATER 2.2)
- Research, monitor and participate in issues in Yolo County and the area of origin of the City’s groundwater that affect the quality and quantity of water (Policy WATER 4.1)

4.8-14(a) The campus should implement LRDP Mitigation 4.8-6(a-c) to minimize its withdrawal from the shallow/intermediate aquifer and maximize the potential for infiltration.
4.8-14(b) Consistent with current water planning policies, the City of Davis is expected to implement measures to reduce impervious surfaces and reduce the amount of water withdrawn from the shallow/intermediate aquifer, consistent with, but not limited to, the water policies listed in LRDP Mitigation 4.8-13(b).

### 7.8.4 Environmental Checklist and Discussion

<table>
<thead>
<tr>
<th>HYDROLOGY &amp; WATER QUALITY</th>
<th>Potentially Significant Impact</th>
<th>Less than Significant with Mitigation</th>
<th>Impact for which 2003 LRDP EIR is Sufficient</th>
<th>Less than Significant Impact</th>
<th>No Impact</th>
</tr>
</thead>
<tbody>
<tr>
<td>a) Violate any water quality standards or waste discharge requirements?</td>
<td>☐</td>
<td>☐</td>
<td>✓</td>
<td>☐</td>
<td>☐</td>
</tr>
<tr>
<td>b) Substantially deplete groundwater supplies or interfere substantially with groundwater recharge such that there would be a net deficit in aquifer volume or a lowering of the local groundwater table level (e.g., the production rate of pre-existing nearby wells would drop to a level which would not support existing land uses or planned uses for which permits have been granted)?</td>
<td>☐</td>
<td>☐</td>
<td>✓</td>
<td>☐</td>
<td>☐</td>
</tr>
<tr>
<td>c) Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, in a manner which would result in substantial erosion or siltation on- or off-site?</td>
<td>☐</td>
<td>☐</td>
<td>✓</td>
<td>☐</td>
<td>☐</td>
</tr>
<tr>
<td>d) Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, or substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or off-site?</td>
<td>☐</td>
<td>☐</td>
<td>✓</td>
<td>☐</td>
<td>☐</td>
</tr>
<tr>
<td>e) Create or contribute runoff water which would exceed the capacity of existing or planned storm water drainage systems or provide substantial additional sources of polluted runoff?</td>
<td>☐</td>
<td>☐</td>
<td>✓</td>
<td>☐</td>
<td>☐</td>
</tr>
<tr>
<td>f) Otherwise substantially degrade water quality?</td>
<td>☐</td>
<td>☐</td>
<td>✓</td>
<td>☐</td>
<td>☐</td>
</tr>
<tr>
<td>g) Place housing within a 100-year flood hazard area as mapped on a federal Flood Hazard Boundary or Flood Insurance Rate Map or other flood hazard delineation map?</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>✓</td>
<td>☐</td>
</tr>
<tr>
<td>h) Place within a 100-year flood hazard area structures which would impede or redirect flood flows?</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>✓</td>
</tr>
<tr>
<td>i) Expose people or structures to a significant risk of loss, injury or death involving flooding, including flooding as a result of the failure of a levee or dam?</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>✓</td>
<td>☐</td>
</tr>
<tr>
<td>j) Inundation by seiche, tsunami, or mudflow?</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>✓</td>
</tr>
</tbody>
</table>
Construction

The 2003 LRDP EIR found that construction on campus under the 2003 LRDP would not contribute substantial loads of sediment or other pollutants to storm water runoff (Impact 4.8-1). Construction on campus is covered under the NPDES state-wide General Permit for Discharge of Storm Water Associated with Construction Activity. As part of this permit, campus construction projects managed by outside contractors and/or disturbing over one acre (including the proposed project) must implement Storm Water Pollution Prevention Plans (SWPPPs), which specify Best Management Practices (BMPs) to reduce the contribution of sediments, spilled and leaked liquids from construction equipment, and other construction-related pollutants to storm water runoff. All routine maintenance activities and any construction projects disturbing less than one acre that are not managed by outside contractors are covered under the campus’ Phase II Municipal Storm Water Management Plan, which requires BMPs to reduce contribution of pollutants to storm water runoff. Because the UC Davis campus is required to comply with the NPDES state-wide permit and Phase II requirements, the water quality effects associated with construction activities on campus are considered to be less than significant. In addition, LRDP Mitigation 4.8-1, included as part of the project, requires the campus to implement BMPs to reduce construction-related water quality impacts.

Operation

The 2003 LRDP EIR found that campus growth under the 2003 LRDP would increase discharge of treated effluent from the campus WWTP into the South Fork of Putah Creek, which could exceed waste discharge requirements and degrade receiving water quality (Impact 4.8-4). The proposed project would not increase the campus population, would relocate members from central campus to the Health Sciences District, and would release existing central campus space which would be renovated in a separate project from wet lab to dry lab space. However, the project would construct wet labs and restrooms, which could result in a slight increase in effluent. Estimated project demand is 22,800 gallons per day. With current and future discharge control programs and possible operational changes, the increased discharge from the WWTP associated with the proposed project as well as other projects under the 2003 LRDP is expected to comply with NPDES regulations, and therefore will not cause degradation of receiving water quality. The campus will continue to monitor effluent discharge in compliance with the applicable WDRs for the WWTP, and if effluent limits are exceeded, the campus will modify its pretreatment program and WWTP operation as appropriate. These practices are further confirmed in LRDP Mitigation 4.8-4(a), which is included as part of the project. In compliance with LRDP Mitigation 4.8-4(b), which also will be implemented as part of the project, the campus will target monitoring and pretreatment for the contaminants specifically identified as of potential concern by the CVRWQCB. These measures would reduce the impact to a less-than-significant level.

The 2003 LRDP EIR found that growth under the 2003 LRDP and other development in the region would increase the cumulative discharge of treated effluent to the Putah Creek watershed, which could degrade receiving water quality (Impact 4.8-12). However, UC Davis is currently the largest discharger of treated effluent to Putah Creek, and no other major dischargers are expected in the future. LRDP Mitigation 4.8-12, included as part of the project, requires implementation of LRDP Mitigation 4.8-4(a-b), discussed above, which would reduce the impact of increased effluent discharge from the campus WWTP to Putah Creek to a less-than-significant level. Therefore, with implementation of LRDP Mitigation 4.8-12, which is included in the proposed project, the cumulative impact would be less than significant.
b) Deep Aquifer

Estimated project demand is 19.0 gallons per minute (gpm) for domestic usage, 750 gpm for fire sprinklers, and 2,500 gpm for fire water. The 2003 LRDP EIR found that campus growth under the 2003 LRDP would increase the amount of water extracted from the deep aquifer and would increase impervious surfaces, which could result in a net deficit in the deep aquifer volume or a lowering of the local groundwater table but would not interfere substantially with recharge of the deep aquifer (Impact 4.8-5). The deep aquifer is confined with limited lateral and vertical recharge and is overlain by thick clay layers that are relatively impermeable. Because of these characteristics, increased impervious surfaces associated with development under the 2003 LRDP will not significantly affect the recharge capacity of the deep aquifer. The 2001 demand for water from the deep aquifer was approximately 2,671 acre-feet. The annual demand for deep aquifer water under the 2003 LRDP, including demand associated with the proposed project, is expected to increase to approximately 5,301 acre-feet through 2015-16 (UC Davis ORMP 2003c). LRDP Mitigation 4.8-5(a-c), included as part of the project, would require continued water conservation efforts, efforts to determine the ability of the deep aquifer to provide for the campus’ long-term water needs, and efforts to minimize withdrawals by UC Davis and the City of Davis from the same deep aquifers. If monitoring identifies that the aquifer is unable to meet the campus’ long-term needs, consistent with LRDP Mitigation 4.8-5(d), the campus would treat intermediate aquifer water and/or surface water to serve domestic water needs. Regardless of these mitigation measures, if UC Davis’ future demand for water from the deep aquifer increases, groundwater levels in the deep aquifer could lower, contributing to a net deficit in the overall groundwater budget. The effects of increased demand on the volume of the deep aquifer are currently not well understood (although consistent with LRDP Mitigation 4.8-5(b), the campus will continue to study these effects). Therefore, this impact is considered significant and unavoidable. This impact was adequately analyzed in the 2003 LRDP EIR and was fully addressed in the Findings and Statement of Overriding Considerations adopted by The Regents in connection with its approval of the 2003 LRDP. No conditions have changed and no new information has become available since certification of the 2003 LRDP EIR that would alter this previous analysis.

Although impacts to the deep aquifer from increased water extraction and increased impervious surfaces (Impact 4.8-5) have been sufficiently addressed in the 2003 LRDP EIR, project-specific impacts will be further evaluated in the project’s Focused Tiered EIR to confirm this finding.

The 2003 LRDP EIR found that growth under the 2003 LRDP and other development in the region would cumulatively increase the amount of water extracted from the deep aquifer and would increase impervious surfaces, which could result in a net deficit in the deep aquifer volume or a lowering of the local groundwater table, but would not interfere substantially with recharge of the deep aquifer (Impact 4.8-13). The long-term reliability of the deep aquifer could be at risk if both UC Davis and the City of Davis rely on the aquifer to meet their future needs. In compliance with LRDP Mitigation 4.8-13(a), included in the proposed project, the campus would take the following actions: minimize withdrawals from those aquifers shared with the City of Davis by locating new wells on the west campus when feasible; monitor the deep aquifer; conserve water; and manage water supplies efficiently. LRDP Mitigation 4.8-13(b) recognizes the City of Davis General Plan’s objectives regarding reduction of water extraction from the deep aquifer. However, regardless of mitigation, because the effects of increased demand on the volume of the deep aquifer are currently not well understood, this impact is considered significant and unavoidable. This impact was adequately analyzed in the 2003 LRDP EIR and was fully addressed in the Findings and Statement of Overriding Considerations adopted by The Regents in connection with its approval of the 2003 LRDP. No conditions have changed and no new information has become available since certification of the 2003 LRDP EIR that would alter this previous analysis.
Shallow/Intermediate Aquifer

The proposed project would construct approximately 1.25 acres of impervious surfaces, including the building footprint, paved pathways, driveways, service roads, and plaza spaces. The project is estimated to have a peak demand for irrigation water of 40 gpm. The 2003 LRDP EIR found that the campus’ extraction from shallow/intermediate aquifers could deplete groundwater levels and could contribute to local subsidence. In addition, increased impervious coverage could interfere with recharge of the shallow/intermediate aquifers. This could result in a net deficit in the intermediate aquifer volume or a lowering of the local groundwater table (Impact 4.8-6).

The 2001 baseline annual campus demand (including irrigation demand associated with the tenant farmer at Russell Ranch) for water from the shallow/intermediate aquifers was approximately 3,827 acre-feet. Under the 2003 LRDP, due to conversion of teaching and research fields to other uses with reduced irrigation requirements, overall annual demand for water from the shallow/intermediate aquifers is anticipated to decrease to approximately 3,362 acre-feet through 2015-16 (UC Davis ORMP 2003c). However, these projections do not address the potential identified in LRDP Mitigation 4.8-5(d) for intermediate aquifer water to be used to serve the campus’ domestic water needs. If this mitigation is implemented, demand for water from the intermediate aquifer could increase. In addition, recent monitoring efforts indicate subsidence in the campus vicinity. Due to the short history of subsidence monitoring in the area, the extent and cause of this subsidence is currently unknown, however, extraction from the shallow/intermediate aquifer could be a contributing factor. Additionally, development under the 2003 LRDP, including the proposed project, would increase the amount of impervious surfaces on campus. However, because the soils underlying the campus generally have low permeability and would provide limited recharge, new impervious surfaces are not likely to significantly reduce the amount and rate of groundwater recharge. Most recharge in the area is associated with streams and waterways, which would not be affected by the project.

LRDP Mitigation 4.8-6(a-c), included as part of the proposed project, would require continued utility water conservation efforts, monitoring of the intermediate aquifer, and subsidence monitoring efforts. Furthermore, implementation of LRDP Mitigation 4.8-6(e), included in the proposed project, would encourage project designs on campus that increase percolation and infiltration to the shallow/intermediate aquifer. The project proposes some design measures, described below in item c) to slow down runoff and thereby increase percolation and infiltration on the site, to the extent possible. If the monitoring efforts required by LRDP Mitigation 4.8-6(b) or (c) identify that campus intermediate aquifer use is contributing to a net deficit in aquifer volume or significant subsidence, LRDP Mitigation 4.8-6(d) would be implemented to reduce campus utility water use by requiring use of Solano Project surface water and/or tertiary treated wastewater effluent from the campus WWTP for irrigation of campus recreation fields. Regardless of mitigation, the combination of effects from continued demand for water from the shallow/intermediate aquifer, local subsidence trends, and increased coverage could potentially result in a significant impact on intermediate aquifer groundwater levels. Therefore, Impact 4.8-6 is considered significant and unavoidable. This impact was adequately analyzed in the 2003 LRDP EIR and was fully addressed in the Findings and Statement of Overriding Considerations adopted by The Regents in connection with its approval of the 2003 LRDP. No conditions have changed and no new information has become available since certification of the 2003 LRDP EIR that would alter this previous analysis.

Although impacts to the shallow/intermediate aquifer from increased water extraction and increased impervious surfaces (Impact 4.8-6) have been sufficiently addressed in the 2003 LRDP EIR, project-specific impacts will be further evaluated in the project’s Focused Tiered EIR to confirm this finding.
The 2003 LRDP EIR found that growth under the 2003 LRDP and other development in the region would cumulatively increase the amount of water extracted from shallow/intermediate aquifers and would increase impervious surfaces. This could contribute to local subsidence, substantially deplete groundwater supplies, and could interfere substantially with recharge of the shallow/intermediate depth aquifer, resulting in a net deficit in the shallow/intermediate aquifer volume or a lowering of the local groundwater table (Impact 4.8-14). Although campus extraction of water from the shallow/intermediate aquifers is anticipated to continue to decrease through 2015-16, a potential increase in extraction in the Davis area could cause well levels to decrease. In addition, extraction from these aquifers could be causing subsidence that has been observed in the area, and increases in impervious surfaces could impede the amount of groundwater recharge. Implementation of LRDP Mitigation 4.8-14(a) and (b) would reduce the campus and City extractions from the shallow/intermediate aquifers, would reduce the amount of new impervious surfaces in the area, and would continue groundwater level and subsidence monitoring efforts. Regardless of mitigation, the combination of effects from continued local demand for water from the shallow/intermediate aquifers, local subsidence trends, and increased coverage could result in a significant and unavoidable impact on the aquifers. This impact was adequately analyzed in the 2003 LRDP EIR and was fully addressed in the Findings and Statement of Overriding Considerations adopted by The Regents in connection with its approval of the 2003 LRDP. No conditions have changed and no new information has become available since certification of the 2003 LRDP EIR that would alter this previous analysis.

c-e) The proposed project would construct approximately 1.25 acres of impervious surfaces, including the building footprint, paved pathways, driveways, service roads, and plaza spaces. Project site runoff enters storm drain inlets that drain to the Arboretum Waterway. Existing drain inlets on the southern portion of the site would require relocation in order to accommodate the proposed building. With respect to on-site storm water runoff management, a bioswale is proposed on the southern side of the building to handle some of the runoff generated by the new building and paving. The bioswale would slow the runoff rate and provide some pollutant filtration and soil percolation of runoff, before discharging remaining unpercolated water into the storm drain collection system. All other site runoff that could not be managed by the bioswale would be collected in the storm drain system and piped to the Arboretum, in the same manner that most other storm water on campus is currently managed. In addition, a 24-inch storm drain pipe runs north-south through the project site where the building footprint is planned. The pipe collects and channels a “subwatershed” within the Health Sciences District of approximately 11 acres. With respect to the storm water “subwatershed” managed by that pipe, the project would study opportunities to handle the storm water through overland solutions to provide more percolation and use of storm water. If the study determines that such solutions prove infeasible, the project would relocate the pipe around the building.

The 2003 LRDP EIR found that development under the 2003 LRDP would increase impervious surfaces on the campus and could alter drainage patterns, thereby increasing runoff and loads of pollutants in storm water, which could adversely affect surface water quality (Impact 4.8-2). Discharge of storm water to the Arboretum Waterway is covered under a NPDES Phase II permit for small municipal storm water systems, which requires BMPs to reduce pollutants in storm water discharge to the maximum extent practicable. LRDP Mitigation 4.8-2 requires the campus to comply with Phase II regulations. As described in item (a) above, both construction and operation activities are required to employ BMPs. With implementation of Phase II requirements, increases in storm water runoff and levels of contaminants in runoff associated with implementation of the 2003 LRDP, including the proposed project, would have a less than significant impact on receiving waters.

The 2003 LRDP EIR found that development under the 2003 LRDP, in conjunction with construction activities, increased impervious surfaces, and alterations to drainage patterns
associated with other development in the watershed could increase storm water runoff and could provide substantial sources of polluted runoff, which could adversely affect receiving water quality (Impact 4.8-10). LRDP Mitigations 4.8-10 (a-c) require the campus and regional jurisdictions to comply with NPDES Phase II requirements and implement SWPPPs for specified industrial and construction activities. However, implementation of LRDP Mitigation 4.8-10(b) and (c) cannot be guaranteed by the University of California because it falls within other jurisdictions to enforce and monitor. Therefore, the impact is currently considered significant and unavoidable. This impact was adequately analyzed in the 2003 LRDP EIR and was fully addressed in the Findings and Statement of Overriding Considerations adopted by The Regents in connection with its approval of the 2003 LRDP. No conditions have changed and no new information has become available since certification of the 2003 LRDP EIR that would alter this previous analysis.

The 2003 LRDP EIR found that implementation of the 2003 LRDP would alter drainage patterns in the project area and would increase impervious surfaces, which could exceed the capacity of storm water drainage systems and result in localized flooding and contribution to offsite flooding (Impact 4.8-3). Campus runoff is not expected to significantly increase peak flows in Putah Creek under the 2003 LRDP because anticipated development represents only a minor increase in the percentage of impervious area in the watersheds. Campus discharges from the Arboretum Waterway to Putah Creek are not expected to exceed the existing pumping capacity of approximately 80 cfs (the current NPDES permit has a maximum discharge limit of 130 cfs). Pursuant to the campus Stormwater Management Plan, the current campus standard for storm water management is a 10-year storm event (Wengler 2005). However, under existing conditions, localized flooding on some portions of the campus occurs during a 2-year storm event. In most cases, this flooding consists of temporary water ponding at storm drain inlets and along roads that does not result in property damage or other serious consequences. Without any improvements, increased runoff associated with development under the 2003 LRDP, including the proposed project, would increase the likelihood of localized flooding (West Yost & Associates 2000). In accordance with LRDP Mitigation 4.8-3(a), included in the project, a drainage study has been performed for the proposed project to determine if capacity in the existing storm drainage system exists. The storm water system has sufficient capacity to absorb additional runoff generated by the project. As discussed above, an additional storm drain connection would be made for the project to handle runoff that cannot be absorbed by the proposed bioswale, and the existing storm drain pipe would either be re-routed or a surface solution for stormwater management would be constructed. The project would select and develop either the pipe re-route or surface solutions during design development and construction drawing detailing. To further reduce the impact, LRDP Mitigation 4.8-3(b) (necessary storm water system and/or onsite detention facilities are constructed) would be implemented. Therefore, this impact would be less than significant.

The 2003 LRDP EIR also found that implementation of the 2003 LRDP in combination with regional development could alter drainage patterns and increase the rate or amount of surface runoff, which could cumulatively exceed the capacity of storm water drainage systems and result in flooding within the Putah Creek watershed (Impact 4.8-11). In most cases, this flooding consists of temporary water ponding at storm drain inlets and along roads that does not result in property damage or other serious consequences. With implementation of LRDP Mitigation 4.8-11, storm water discharges from the campus would be reduced and would not contribute to regional flooding problems.

Storm water runoff pollution is evaluated further in items (a,f) above.

g, h) The proposed project would be constructed outside the 100-year flood zones on campus (see 2003 LRDP EIR, Figure 4.8-4, 100-Year Floodplain), and the project does not include housing. Therefore, no impact would occur.
i) The campus is located approximately 23 miles downstream of the Monticello Dam (forming Lake Berryessa) and approximately 15 miles downstream of the Putah Diversion Dam. An inundation study prepared by the U.S. Bureau of Reclamation shows that, in the highly unlikely case of a dam breach, the campus (as well as the City of Davis) would be inundated under a maximum of 3 to 9 feet of water approximately 3.5 to 4 hours following the breach (USBR 1998). However, the probability of such a release is far less than one in one million (USBR 2000). As of June 2000, Monticello Dam was determined to be in satisfactory condition, and the dam exhibited no unusual cracks, seeps, or deformations. In addition, the State Department of Dam Safety evaluates dams regularly, which would give adequate time to respond to any deterioration in the safety of the structure. Therefore, the risk of flooding on campus as a result of a dam failure is considered to be a less-than-significant impact.

j) The campus is not subject to inundation by seiche, tsunami, or mudflow. The campus is generally flat and is not located in close proximity to any large water bodies. Therefore, no impact would occur.

**Summary**

Mitigation Measures 4.8-1, 4.8-2, 4.8-3(a-b), 4.8-4(a-b), 4.8-5(a-d), 4.8-6(a-e), 4.8-10(a-c), 4.8-11, 4.8-12, 4.8-13(a-b), and 4.8-14(a-b) from the 2003 LRDP EIR are relevant to the proposed project and reduce the significance of hydrology and water quality impacts to the extent feasible. The proposed project would not exceed the levels of significance of hydrology and water quality impacts previously addressed in the 2003 LRDP EIR, nor would it introduce any new significant hydrology and water quality impacts that were not previously addressed.
7.9 LAND USE & PLANNING

7.9.1 Background

Section 4.9 of the 2003 LRDP EIR addresses the land use and planning effects of campus growth under the 2003 LRDP. The following discussion summarizes information presented in the 'Setting' subsection of Section 4.9 of the 2003 LRDP EIR.

Campus

The approximately 5,300-acre UC Davis campus is located within Yolo and Solano counties. Local land use is predominantly agricultural, with small cities and towns. The campus is surrounded by extensive agricultural uses to the west and south and by residential, institutional, and commercial land uses in the City of Davis, to the north and east. The City of Davis is a university-oriented community with over 62,000 residents. The UC Davis campus consists of four general units: the central campus, the south campus, the west campus, and Russell Ranch. In addition, the University of California owns several properties in the City of Davis, including buildings in downtown Davis and buildings and vacant parcels in the South Davis Research Park, located south of I-80.

As a state entity, UC Davis is not subject to municipal policies such as the City of Davis General Plan. Nevertheless, such policies are of interest to the campus. The campus has a tradition of working cooperatively with the local communities and it is University policy to seek consistency with local plans and policies, where feasible.

The 2003 LRDP is the campus' primary land use planning guide. It designates campus lands for the following uses through 2015-16: Academic and Administrative (High and Low Density); Teaching and Research Fields; Teaching and Research Open Space; Parking; Physical Education, Intercollegiate Athletics, and Recreation (PE/ICA/Recreation); Research Park (High and Low Density); Formal Open Space; Community Gardens; Faculty/Staff Housing, Student Housing; Mixed Use Housing; and Elementary School.

Project Site

The project site is currently a vacant, open field adjacent to other School of Veterinary Medicine facilities, in the Health Sciences District of central campus. The site is designated for academic and administrative uses in the 2003 LRDP EIR.

7.9.2 2003 LRDP EIR Standards of Significance

The 2003 LRDP EIR considers a land use and planning impact significant if growth under the 2003 LRDP would:

- Conflict with any applicable land use plan, policy, or regulation of an agency with jurisdiction over the project adopted for the purpose of avoiding or mitigating an environmental effect.
- Result in development of land uses that are substantially incompatible with existing adjacent land uses or with planned uses.
- Conflict with any applicable habitat conservation plan or natural community conservation plan.

An additional standard from the CEQA Guidelines’ Environmental Checklist ("a" in the checklist below) was found not applicable to campus growth under the 2003 LRDP.
7.9.3 2003 LRDP EIR Impacts and Mitigation Measures

Impacts of campus growth under the 2003 LRDP through 2015-16 related to land use and planning are evaluated in Section 4.9 of the 2003 LRDP EIR. As analyzed in Section 4 of this Initial Study, the proposed project is within the scope of analysis in the 2003 LRDP EIR. The 2003 LRDP EIR did not identify any potentially significant or significant land use and planning impacts. The less than significant land use and planning impacts identified in the 2003 LRDP EIR do not require mitigation.

7.9.4 Environmental Checklist and Discussion

<table>
<thead>
<tr>
<th>LAND USE &amp; PLANNING</th>
<th>Potentially Significant Impact</th>
<th>Less than Significant with Mitigation</th>
<th>Impact for which 2003 LRDP EIR is Sufficient</th>
<th>Less than Significant Impact</th>
<th>No Impact</th>
</tr>
</thead>
<tbody>
<tr>
<td>Would the project…</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>a) Physically divide an established community?</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☑</td>
</tr>
<tr>
<td>b) Conflict with any applicable land use plan, policy, or regulation of an agency with jurisdiction over the project (including, but not limited to the general plan, specific plan, local coastal program, or zoning ordinance) adopted for the purpose of avoiding or mitigating an environmental effect?</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☑</td>
</tr>
<tr>
<td>c) Conflict with any applicable habitat conservation plan or natural community conservation plan?</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☑</td>
</tr>
<tr>
<td>d) Result in development of land uses that are substantially incompatible with existing adjacent land uses or with planned uses?</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☑</td>
</tr>
</tbody>
</table>

a) The proposed project would have no potential to physically divide an established community. No impact would occur and no additional analysis is required.

b) The applicable land use plan for the campus is the 2003 LRDP. The proposed project is consistent with the 2003 LRDP Academic and Administrative site land use designation. No impact would occur.

c) The campus does not fall within the boundaries of, nor is it adjacent to, an adopted regional HCP or NCCP. The campus has implemented two low effects HCPs for VELB at Russell Ranch. The project is not located at or near Russell Ranch. Therefore, the proposed project would not conflict with an adopted HCP or NCCP. No impact would occur.

d) The 2003 LRDP EIR identifies that an impact could result if land uses are developed under the 2003 LRDP EIR that are substantially incompatible with existing adjacent land uses or with planned uses. Situated adjacent to existing School of Veterinary Medicine facilities, the proposed project is compatible with the site's context and with existing and planned adjacent land uses. No impact would occur.

Summary

The 2003 LRDP EIR did not identify any significant land use and planning impacts, nor did it identify any associated mitigation measures. The proposed project would not exceed the levels of significance of land use and planning impacts previously addressed in the 2003 LRDP EIR, nor would it introduce any new significant land use and planning impacts that were not previously addressed.
7.10 **MINERAL RESOURCES**

7.10.1 **Background**

Section 4.6, Geology, Soils, and Seismicity, of the 2003 LRDP EIR briefly addresses mineral resources issues. The 2003 LRDP EIR concludes that development on campus would not impede extraction or result in the loss of availability of mineral resources.

Sand and gravel are important mineral resources in the region (CDOC 2000). However, natural gas is the only known or potential mineral resource that has been identified on campus. Natural gas can be extracted at wells placed considerable distances from deposits. No other known or potential mineral resources have been identified on the UC Davis campus. Therefore, development on campus does not impede extraction or result in the loss of availability of mineral resources.

7.10.2 **2003 LRDP EIR**

Because development on campus would not impede extraction or result in the loss of availability of mineral resources, the 2003 LRDP EIR did not identify any standards of significance, impacts, or mitigation measures associated with mineral resources. As analyzed in Section 4 of this Initial Study, the proposed project is within the scope of analysis in the 2003 LRDP EIR.

7.10.3 **Environmental Checklist and Discussion**

<table>
<thead>
<tr>
<th>MINERAL RESOURCES</th>
<th>Potentially Significant Impact</th>
<th>Less than Significant with Mitigation</th>
<th>Impact for which 2003 LRDP EIR is Sufficient</th>
<th>Less than Significant Impact</th>
<th>No Impact</th>
</tr>
</thead>
<tbody>
<tr>
<td>a) Result in the loss of availability of a known mineral resource that would be of value to the region and the residents of the state?</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☒</td>
</tr>
<tr>
<td>b) Result in the loss of availability of a locally-important mineral resource recovery site delineated on a local general plan, specific plan or other land use plan?</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☒</td>
</tr>
</tbody>
</table>

a, b) Natural gas is the only known or potential mineral resource that has been identified on campus. Natural gas can be extracted at wells placed considerable distances from deposits. Therefore, development on campus would not impede extraction or result in the loss of availability of a known mineral resource. No impact would occur and no further analysis is required.
7.11 Noise

7.11.1 Background

Section 4.10 of the 2003 LRDP EIR addresses the noise effects of campus growth under the 2003 LRDP. The following discussion summarizes information presented in the ‘Setting’ subsection of Section 4.10 of the 2003 LRDP EIR.

Campus

The primary noise source in the vicinity of the campus is vehicular traffic using I-80, SR 113, and local roads. Other sources of noise include occasional aircraft over-flights associated with the University Airport located on the west campus and another small airport in the vicinity, agricultural activities, railroads, and landscaping activities. Land use surrounding the campus is primarily agricultural, with residential, commercial, and other uses concentrated along the northern and eastern boundaries of the main campus.

Sound is technically described in terms of amplitude (loudness) and frequency (pitch). The standard unit of sound amplitude measurement is the decibel (dB), and the decibel scale adjusted for A-weighting (dBA) is a special frequency-dependent rating scale that relates to the frequency sensitivity of the human ear. Community noise usually consists of a base of steady “ambient” noise that is the sum of many distant and indistinguishable noise sources, as well as more distinct sounds from individual local sources. A number of noise descriptors are used to analyze the effects of community noise on people, including the following:

- \( L_{eq} \), the equivalent energy noise level, is the average acoustic energy content of noise, measured during a prescribed period, typically one hour.
- \( L_{dn} \), the Day-Night Average Sound Level, is a 24-hour-average \( L_{eq} \) with a 10 dBA “penalty” added to noise occurring during the hours of 10:00 PM to 7:00 AM to account for greater nocturnal noise sensitivity.
- \( CNEL \), the Community Noise Equivalent Level, is a 24-hour-average \( L_{eq} \) with a “penalty” of 5 dB added to evening noise occurring between 7:00 PM and 10:00 PM, and a “penalty” of 10 dB added to nighttime noise occurring between 10:00 PM and 7:00 AM.

Noise monitoring over a 24-hour period in 2003 at sites located in urban areas on and adjacent to the campus (including areas next to freeways, roads, residences, and academic buildings) reflected CNEL levels ranging from 63 to 65 dBA CNEL. Ambient noise levels measured over a short period at various urban sites on campus varied from 49 to 63 dBA \( L_{eq} \).

Project Site

Interstate 80, south of the project site, Garrod Drive, east and south of the site, and Parking Lot 50, south of the site, bring traffic noise to the site. To the south, west, and north of the site, veterinary patient drop-offs, deliveries, garbage pick-ups, and building mechanical equipment noise from adjacent buildings all generate some noise that carries to the proposed project site. North of the site, noises associated with athletic events at Schaal Aquatic Center are clearly heard on the project site. Existing sources of noise originating from the project site include the operation of landscape maintenance equipment for weed control on the site, and traffic noise on the temporary road running north-south through the site.
7.11.2 2003 LRDP EIR Standards of Significance

The 2003 LRDP EIR considers a noise impact significant if growth under the 2003 LRDP would result in the following:

- Exposure of persons to or generation of noise levels in excess of levels set forth in Table 4.10-3 of the 2003 LRDP EIR.

<table>
<thead>
<tr>
<th>Noise Source(^a)</th>
<th>Criterion Noise Level(^b)</th>
<th>Substantial Increase in Noise Level(^b)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Road Traffic and Other Long-Term Sources</td>
<td>65 dBA CNEL</td>
<td>&gt;=3 dBA if CNEL w/project is &gt;= 65 dBA &gt;=5 dBA if CNEL w/project is 50–64 dBA &gt;=10 dBA if CNEL w/project is &lt; 50 dBA</td>
</tr>
<tr>
<td>Stadium (Periodic, intermittent)</td>
<td>70 dBA L(_{eq}(h)) (^c)</td>
<td>Not Applicable</td>
</tr>
<tr>
<td></td>
<td>Daytime (7:00 a-7:00 p)</td>
<td></td>
</tr>
<tr>
<td></td>
<td>70 dBA L(_{eq}(h))</td>
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<tr>
<td></td>
<td>Evening (7:00 p-11:00 p)</td>
<td></td>
</tr>
<tr>
<td></td>
<td>65 dBA L(_{eq}(h))</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Nighttime (11:00 p-7:00 a)</td>
<td></td>
</tr>
<tr>
<td>Railroad</td>
<td>Within 750 feet of railroad line(^d)</td>
<td></td>
</tr>
<tr>
<td>Aircraft</td>
<td>65 dBA CNEL</td>
<td>&gt;=1.5 dBA if CNEL w/project is &gt;= 65 dBA &gt;=3 dBA if CNEL w/project is 60–64 dBA &gt;=5 dBA if CNEL w/project is &lt; 60 dBA</td>
</tr>
<tr>
<td>Construction (temporary)</td>
<td>80 dBA L(_{eq}(h)) (^e)</td>
<td>Not Applicable</td>
</tr>
<tr>
<td></td>
<td>daytime (7:00 a-7:00 p)</td>
<td></td>
</tr>
<tr>
<td></td>
<td>80 dBA L(_{eq}(h))</td>
<td></td>
</tr>
<tr>
<td></td>
<td>evening (7:00 p-11:00 p)</td>
<td></td>
</tr>
<tr>
<td></td>
<td>70 dBA L(_{eq}(h)) nighttime (11:00 p-7:00 a)</td>
<td></td>
</tr>
</tbody>
</table>

Source: 2003 LRDP EIR

\(^a\) The 2003 LRDP would not substantially increase rail activity; therefore, a threshold of significance for rail noise is not included in this table.

\(^b\) At noise-sensitive land use unless otherwise noted. Noise-sensitive land uses include residential and institutional land uses.

\(^c\) L\(_{eq}(h)\) is an average measurement over a one-hour period.

\(^d\) Screening analysis distance criterion from FTA 1995.

\(^e\) L\(_{eq}(8h)\) is an average measurement over an eight-hour period.

- Exposure of persons to or generation of excessive groundborne vibration or groundborne noise levels.

- A substantial permanent increase in ambient noise levels in the project vicinity above levels existing without the project.

- A substantial temporary or periodic increase in ambient noise levels in the project vicinity above levels existing without the project.

- For a project within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, exposure of people residing or working in the project area to excessive noise levels.

7.11.3 2003 LRDP EIR Impacts and Mitigation Measures

Impacts of campus growth under the 2003 LRDP through 2015-16 related to noise are evaluated in Section 4.10 of the 2003 LRDP EIR. As analyzed in Section 4 of this Initial Study, the proposed
Mitigation measures in the 2003 LRDP EIR that are applicable to the proposed project are presented below. Since these mitigation measures are already being carried out as part of implementation of the 2003 LRDP, they will not be readopted in this Initial Study. The benefits of these mitigation measures will be achieved independently of considering them as specific mitigation measures of this project. Nothing in this Initial Study in any way alters the obligations of the campus to implement 2003 LRDP EIR mitigation measures.

### 2003 LRDP EIR Mitigation Measures

**NOISE**

| 4.10-1 | Prior to initiation of construction, the campus 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 100 feet away from noise-sensitive land uses as feasible.
| | • Laydown and construction vehicle staging areas shall be located 100 feet away from noise-sensitive land uses as feasible.
| | • 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.
| | • Loud construction activity (i.e., construction activity such as jackhammering, concrete sawing, asphalt removal, and large-scale grading operations) within 100 feet of a residential or academic building shall not be scheduled during finals week.
| | • Loud construction activity as described above within 100 feet of an academic or residential use shall, to the extent feasible, be scheduled during holidays, Thanksgiving breaks, Christmas break, Spring break, or Summer break.
| | • Loud construction activity within 100 feet of a residential or academic building shall be restricted to occur between 7:30 AM and 7:30 PM.
| 4.10-5 | Implement LRDP Mitigations 4.10-1 and 4.10-2.
7.11.4 Environmental Checklist and Discussion

<table>
<thead>
<tr>
<th>NOISE</th>
<th>Potentially Significant Impact</th>
<th>Less than Significant with Mitigation</th>
<th>Impact for which 2003 LRDP EIR is Sufficient</th>
<th>Less than Significant Impact</th>
<th>No Impact</th>
</tr>
</thead>
<tbody>
<tr>
<td>Would the project…</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>a) Exposure of persons to or generation of noise levels in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies?</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☑</td>
<td>☐</td>
</tr>
<tr>
<td>b) Exposure of persons to or generation of excessive groundborne vibration or groundborne noise levels?</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☑</td>
<td>☐</td>
</tr>
<tr>
<td>c) A substantial permanent increase in ambient noise levels in the project vicinity above levels existing without the project?</td>
<td>☐</td>
<td>☐</td>
<td>☑</td>
<td>☐</td>
<td>☐</td>
</tr>
<tr>
<td>d) A substantial temporary or periodic increase in ambient noise levels in the project vicinity above levels existing without the project?</td>
<td>☐</td>
<td>☐</td>
<td>☑</td>
<td>☐</td>
<td>☐</td>
</tr>
<tr>
<td>e) For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project expose people residing or working in the project area to excessive noise levels?</td>
<td>☐</td>
<td>☐</td>
<td>☑</td>
<td>☐</td>
<td>☐</td>
</tr>
<tr>
<td>f) For a project within the vicinity of a private airstrip, would the project expose people residing or working in the project area to excessive noise levels?</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☑</td>
<td>☐</td>
</tr>
</tbody>
</table>

a,c) Generation of noise levels on or adjacent to the project site associated with vehicle trips, mechanical equipment, and landscape maintenance equipment would contribute to ambient noise levels on campus. There would be more vehicle trips to the Health Sciences District associated with the proposed project, and in particular, there would be more delivery trips as a result of the Veterinary Medicine Storehouse moving from Haring Hall to the proposed project building. Concomitantly, delivery vehicle trips would be reduced on the core campus with the relocation of the Storehouse. There would not be an increase in the total number of delivery trips associated with the Storehouse, and there could be a decrease in the total number of delivery trips if the Storehouse reduces its store size and volume of products offered for sale. Since the project would not add any members to the campus population, the project would not contribute to increased commuting trips in the region, and would not increase vehicular traffic on the regional road network. Therefore, traffic-related noise would not increase as a result of this project. This impact would be less than significant.

b,d) The proposed project would use conventional construction techniques and machinery. Extensive site over-excavation, compaction, and grading, concrete pours and steel erection would be required, all of which generate construction noise. No pile driving, blasting, or other special construction techniques are anticipated as part of this project. It is anticipated that project construction would last for approximately two years. At peak construction, it is estimated that about 6-8 pieces of heavy construction equipment and 100 construction vehicles (primarily contractor pick-up trucks) would be on the project site.

The 2003 LRDP EIR found that construction of campus facilities pursuant to the 2003 LRDP could expose nearby receptors to excessive groundborne vibration and airborne or groundborne
noise (Impact 4.10-1). Construction under the 2003 LRDP, including the proposed project, would require temporary construction activities using conventional construction techniques and equipment that would not generate substantial levels of vibration or groundborne noise. Routine noise levels from conventional construction activities (with the normal number of equipment operating on the site) range from 75 to 86 dBA Leq at a distance of 50 feet, from 69 to 80 dBA Leq at a distance of 100 feet, from 55 to 66 dBA Leq at a distance of 500 feet, and 48 to 60 dBA Leq at a distance of 1,000 feet (although noise levels would likely be lower due to additional attenuation from ground effects, air absorption, and shielding from miscellaneous intervening structures). Noise from project construction is predicted to be below the significance criteria of 80 dBA Leq daytime and evening and 70 dBA Leq nighttime at a distance of 100 feet or more from the construction activity. However, noise from construction would be audible and would temporarily elevate the local ambient noise level to some degree at distances greater than 100 feet from construction. There are classrooms and office spaces, as well as the Veterinary Medicine Teaching Hospital, in buildings adjacent to the proposed project. The faculty, staff, and students who use these buildings frequently depend upon conditions conducive to quiet activities. Therefore, LRDP Mitigation 4.10-1, included in the proposed project, would be implemented to control construction noise and the potential impact would be less than significant.

The 2003 LRDP EIR also recognized that development under the 2003 LRDP in combination with other regional development would cumulatively increase ambient noise levels (4.10-5). Cumulative development would increase the number of people in the region who would be exposed to temporary construction-related noise. LRDP Mitigation 4.10-5, included as part of the proposed project, would require application of the recommended noise control measures detailed in LRDP Mitigation 4.10-1. The 2003 LRDP EIR found that, with this mitigation, the cumulative impact associated with construction noise would be less than significant.

e) The project site is approximately 1.3 miles from University Airport. The 2003 LRDP, including the proposed project, does not propose changes to University Airport operations, nor does it propose occupied uses within the airport's 65 CNEL noise contour. Therefore, the project would not expose people to excessive noise levels associated with this public use airport, and the impact is less than significant.

f) The University Airport is a public use airport, not a private airstrip. No other private airport facilities are within the immediate vicinity of the campus. No impact would occur. Refer to item e) above for discussion of potential noise impacts associated with the campus' public use airports.

Summary

Mitigation measures 4.10-1 and 4.10-5 from the 2003 LRDP EIR are relevant to the proposed project and reduce the significance of noise impacts to the extent feasible. The proposed project would not exceed the levels of significance of noise impacts previously addressed in the 2003 LRDP EIR, nor would it introduce any new significant noise impacts that were not previously addressed.
7.12  **Population & Housing**

7.12.1  **Background**

Section 4.11 of the 2003 LRDP EIR addresses the population and housing effects of campus growth under the 2003 LRDP. The following discussion summarizes information presented in the ‘Setting’ subsection of Section 4.11 of the 2003 LRDP EIR.

The on-campus population at UC Davis includes students, faculty/staff, and non-UC Davis affiliates working on campus. The current and projected campus population figures are presented in Table 1 of this Tiered Initial Study. As of 2003, approximately 80 percent of the student population and 50 percent of the employee population lived in the Davis area, and approximately 94 percent of students and 90 percent of employees lived within the three-county area of Yolo, Solano, and Sacramento counties. Outside the City of Davis, the predominant residence locations of students and employees are Woodland, West Sacramento, Winters, Dixon, Vacaville, and Fairfield (UC Davis ORMP 2003d).

Vacancy rates in the City of Davis are considered low, and housing costs in the City are generally higher than those elsewhere in the region. Since 1994, the campus has been working toward the goals of maintaining a UC Davis housing supply that can accommodate 25 percent of the on-campus enrolled students and can offer housing to all eligible freshmen. The 2003 LRDP focuses on providing additional on-campus student housing that will accommodate a total of approximately 7,800 students on the core campus (or 26 percent of the peak student enrollment through 2015-16) and an additional 3,000 students in a west campus neighborhood. The campus currently offers one faculty and staff housing area (Aggie Village), which includes 21 single-family units (17 of which have cottages) and 16 duplexes. The 2003 LRDP plans to provide an additional 500 faculty and staff housing units within the west campus neighborhood through 2015-16.

**Project Site**

The project site is currently vacant. No housing is located or planned on or adjacent to the project site. The proposed project would not add any members to the campus population.

7.12.2  **2003 LRDP EIR Standards of Significance**

The 2003 LRDP EIR considers an impact related to population and housing significant if growth under the 2003 LRDP would:

- Directly induce substantial population growth in the area by proposing new housing and employment.
- Create a demand for housing that could not be accommodated by local jurisdictions.
- Induce substantial population growth in an area indirectly (for example, through extension of roads or other infrastructure).

Additional standards from the CEQA Guidelines' Environmental Checklist (“b” and “c” in the checklist below) was found not applicable to campus growth under the 2003 LRDP.

7.12.3  **2003 LRDP EIR Impacts and Mitigation Measures**

Impacts of campus growth under the 2003 LRDP through 2015-16 related to population and housing are evaluated in Section 4.11 of the 2003 LRDP EIR. As analyzed in Section 4 of this Initial Study, the proposed project is within the scope of analysis in the 2003 LRDP EIR. No significant impacts
identified in the 2003 LRDP EIR related to population and housing are relevant to the proposed project.

### 7.12.4 Environmental Checklist and Discussion

#### POPULATION & HOUSING

<table>
<thead>
<tr>
<th>Would the project…</th>
<th>Potentially Significant Impact</th>
<th>Less than Significant with Mitigation</th>
<th>Impact for which 2003 LRDP EIR is Sufficient</th>
<th>Less than Significant Impact</th>
<th>No Impact</th>
</tr>
</thead>
<tbody>
<tr>
<td>a) Induce substantial population growth in an area, either directly (for example, by proposing new homes and businesses) or indirectly (for example, through extension of roads or other infrastructure)?</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☑</td>
</tr>
<tr>
<td>b) Displace substantial numbers of existing housing, necessitating the construction of replacement housing elsewhere?</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☑</td>
</tr>
<tr>
<td>c) Displace substantial numbers of people, necessitating the construction of replacement housing elsewhere?</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☑</td>
</tr>
<tr>
<td>d) Create a demand for housing that cannot be accommodated by local jurisdictions?</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☑</td>
</tr>
</tbody>
</table>

a) The proposed project would not result in an increase in the campus population. The project purpose is to provide modern laboratory and office space for existing personnel in the School of Veterinary Medicine (SVM), consolidate members of the SVM, and release space in the core academic area of campus for general campus programs. The project does not propose to increase student enrollment or add faculty or staff employees. No impact would occur.

The project would include connections and utilities improvements to the steam system and the stormwater drainage/management system. The project would also make connections to the domestic water, utility water, chilled water, natural gas, electrical, and telecommunication utilities systems. However, the 2003 LRDP EIR found that implementation of the 2003 LRDP, including the proposed project, would not induce substantial population growth in the area indirectly through the extension of roads or other infrastructure because these extensions would not be provided with excess capacity in an area where lack of infrastructure is an obstacle to growth.

b-d) The proposed project would not increase the campus population, displace any existing housing, displace substantial numbers of people, or create a demand for housing that could not be accommodated by local jurisdictions. Therefore, no impacts to population or housing would occur.

#### Summary

The 2003 LRDP EIR did not identify any mitigation measures to reduce the significance of impacts associated with population and housing. The proposed project would not exceed the levels of significance of population and housing impacts previously addressed in the 2003 LRDP EIR, nor would it introduce any new significant population and housing impacts that were not previously addressed.
7.13 PUBLIC SERVICES

7.13.1 Background

Section 4.12 of the 2003 LRDP EIR addresses the public services effects of campus growth under the 2003 LRDP. The following discussion summarizes information presented in the ‘Setting’ subsection of Section 4.13 of the 2003 LRDP EIR.

In accordance with the CEQA Guidelines, this Public Services analysis evaluates the environmental effects associated with any physical changes required to meet increases in demand for public services, including police, fire protection, schools, and libraries. Project-level public services impacts are addressed by evaluating the effects of on-campus population growth on public services that directly serve the on-campus population (primarily UC Davis services). Cumulative public services impacts are addressed by evaluating the effects of off-campus population growth on the public services in the Cities of Davis, Dixon, Winters, and Woodland.

UC Davis provides most public services needed on campus, including fire protection, police protection, and library services. The Davis Joint Unified School District serves the City of Davis and portions of Yolo and Solano counties. These services are discussed further below:

- **Fire Protection:** The UC Davis Fire Department provides primary fire response and prevention, natural disaster response, hazardous materials incident response, and emergency medical service to the main campus. The fire department’s goal is to respond to 90 percent of campus emergency calls within 6 minutes (UC Davis Fire Department 2003). As of 2003, the UC Davis Fire Department achieves its stated standard of response (Chandler 2003).

- **Police:** In 2001-02, the UC Davis Police Department employed approximately 32 sworn officers to provide 24-hour service to the main campus and facilities owned and leased by UC Davis in the City of Davis, a service area including a campus population of approximately 36,445 people (including UC and non-UC employees, students, and dependents living in on-campus housing) (Chang 2001). Although the campus does not currently rely on any level-of-service standards, the Police Department has indicated that it would like to reach and maintain 1 sworn officer on the main campus per 1,000 members of the campus population. In 2001-02, the campus was just under this level, with approximately 0.9 sworn officers per 1,000 members of the campus population.

- **Schools:** In 2001-02 a total of approximately 8,677 students were enrolled in the DJUSD's nine elementary schools, two junior high schools, one high school, one continuation high school, and one independent study program. The DJUSD estimates student enrollment based on a rate of 0.69 student per single-family residential unit and 0.44 student per multi-family residential unit in its service area.

- **Libraries:** UC Davis currently has four main libraries, distributed among the academic centers of the central campus, which serve students, faculty, staff, and the general public, including: Shields Library (the main campus library located centrally on the core campus), the Carlson Health Sciences Library, the Law Library, and the Physical Sciences and Engineering Library.

**Project Site**

The project site is currently vacant and there are no planned public service facilities (fire, police, schools or libraries) on or adjacent to the site. The Carlson Medical Sciences Library is housed in a building approximately 150 feet from the project site, and is open to limited public use. The Carlson Library would not be affected by the proposed project.
The 2003 LRDP EIR Standards of Significance

The 2003 LRDP EIR considers a public services impact significant if growth under the 2003 LRDP would:

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

Effects associated with recreation services are evaluated in Section 7.14, Recreation, and effects associated with the capacity of the domestic fire water system to provide adequate fire protection are evaluated in Section 7.16, Utilities.

The 2003 LRDP EIR Impacts and Mitigation Measures

Impacts of campus growth under the 2003 LRDP through 2015-16 on public services are evaluated in Section 4.12 of the 2003 LRDP EIR. As analyzed in Section 4 of this Initial Study, the proposed project is within the scope of analysis in the 2003 LRDP EIR. Significant public services impacts identified in the 2003 LRDP EIR that are relevant to the proposed project are presented below with their corresponding levels of significance before and after application of mitigation measures identified in the 2003 LRDP EIR. No significant impacts identified in the 2003 LRDP EIR related to public services are relevant to the proposed project.

Environmental Checklist and Discussion

<table>
<thead>
<tr>
<th>Public Services</th>
<th>Potentially Significant Impact</th>
<th>Less than Significant with Mitigation</th>
<th>Impact for which 2003 LRDP EIR is Sufficient</th>
<th>Less than Significant Impact</th>
<th>No Impact</th>
</tr>
</thead>
<tbody>
<tr>
<td>a) Would the project result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives for any of the public services:</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☑</td>
<td></td>
</tr>
<tr>
<td>i) Fire protection?</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☑</td>
<td></td>
</tr>
<tr>
<td>ii) Police protection?</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☑</td>
<td></td>
</tr>
<tr>
<td>iii) Schools?</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☑</td>
<td></td>
</tr>
<tr>
<td>iv) Parks?</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☑</td>
<td></td>
</tr>
<tr>
<td>v) Other public facilities?</td>
<td>☐</td>
<td>☐</td>
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</tr>
</tbody>
</table>

a, i&ii) UC Davis Fire and Police Protection

The proposed project would not increase the campus population, and is not expected to result in an increase in the demand for campus fire and police services or regional fire and police services above the demand that is anticipated under the 2003 LRDP EIR. The project would meet all applicable fire safety code regulations. No impact would occur.
a, iii) **Schools**

The proposed project would not increase the campus population, and, accordingly, would not contribute to the number of school-age persons living in the region. No impact would occur.

a, iv) Effects associated with parks are evaluated in Section 7.14, Recreation.

a, v) **Libraries**

The proposed project would not contribute to the campus population, and thus would not increase demand on library resources and access in the region. No impact would occur.

**Summary**

No LRDP EIR Mitigation Measures from the 2003 LRDP EIR are relevant to the proposed project and reduce the significance of public service-related impacts to the extent feasible. The proposed project would not exceed the levels of significance of public service impacts previously addressed in the 2003 LRDP EIR, nor would it introduce any new significant public service impacts that were not previously addressed.
7.14 RECREATION

7.14.1 Background

Section 4.13 of the 2003 LRDP EIR addresses the environmental effects associated with modifying recreational resources to meet campus growth under the 2003 LRDP. The following discussion summarizes information presented in the ‘Setting’ subsection of Section 4.13 of the 2003 LRDP EIR.

UC Davis contains many park-like areas and recreation facilities. Park facilities at UC Davis range in size from small picnic and landscaped areas within campus housing areas to extensively landscaped areas in the academic core of the central campus, such as the Arboretum. Areas such as the Quad, the landscaped areas along A Street and Russell Boulevard, the Putah Creek Riparian Reserve in the west campus, and many areas within the Arboretum are used regularly by members of the UC Davis campus and visitors to the campus.

Recreation facilities on the campus include structures, bike paths, and fields used for physical education, intercollegiate athletics, intramural sports, sports clubs, and general recreation. Recreation structures include Hickey Gym, Recreation Hall, the Recreation Swimming Pool, and Recreation Lodge. In addition, two major campus recreation facilities are currently under construction: the Activities and Recreation Center and the Schaal Aquatic Center. The general public may purchase privilege cards to use some campus recreation facilities, or may join community or campus organizations that have access to some facilities.

Project Site

The campus Arboretum is approximately 800 feet south of the project site. The Arboretum is a regional recreational facility open to the public. There are no existing or planned recreational facilities on the project site.

7.14.2 2003 LRDP EIR Standards of Significance

The 2003 LRDP EIR considers a recreation impact significant if growth under the 2003 LRDP would:

- Increase the use of existing neighborhood and regional parks or other recreation facilities such that substantial physical deterioration of the facility would occur or be accelerated.
- Propose the construction of recreation facilities or require the expansion of recreation facilities, which might have an adverse physical effect on the environment.

7.14.3 2003 LRDP EIR Impacts and Mitigation Measures

Impacts of campus growth under the 2003 LRDP through 2015-16 associated with recreation are evaluated in Section 4.13 of the 2003 LRDP EIR. As analyzed in Section 4 of this Initial Study, the proposed project is within the scope of analysis in the 2003 LRDP EIR. No significant impacts identified in the 2003 LRDP EIR related to recreation are relevant to the proposed project.

7.14.4 Environmental Checklist and Discussion

<table>
<thead>
<tr>
<th>RECREATION</th>
<th>Potentially Significant Impact</th>
<th>Less than Significant with Mitigation</th>
<th>Impact for which 2003 LRDP EIR is Sufficient</th>
<th>Less than Significant Impact</th>
<th>No Impact</th>
</tr>
</thead>
<tbody>
<tr>
<td>Would the project…</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
a) Would the project increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated? □ □ □ ☑ □

b) Does the project include recreational facilities or require the construction or expansion of recreational facilities which might have an adverse physical effect on the environment? □ □ □ ☑

---

a) The proposed project would not increase the campus population. The estimated maximum occupancy of the proposed facility would be approximately 458 members of the campus population, who would be relocated from central campus to the Health Sciences District, closer to the Arboretum. Those members may choose to visit the Arboretum more frequently given their closer proximity to that campus recreational amenity. The Arboretum, at the west end of campus near the Health Sciences District, has a number of facilities to handle such visits: the Gazebo, a restroom facility which opened in 2006, outdoor furniture such as benches, drinking fountains, and a variety of gardens and walking paths. The additional number of visits would constitute a less-than-significant impact on campus recreational facilities.

b) The proposed project would not increase the campus population, would not add to the demand for off campus parks or recreational facilities, and would not include any indoor or outdoor recreational facilities. No impact would occur.

**Summary**

No LRDP EIR Mitigation Measures from the 2003 LRDP EIR are relevant to the proposed project to reduce the significance of recreation-related impacts to the extent feasible. With the implementation of these measures, the proposed project would not exceed the levels of significance of recreation impacts previously addressed in the 2003 LRDP EIR, nor would it introduce any new significant recreation impacts that were not previously addressed.
7.15 TRANSPORTATION, CIRCULATION, & PARKING

7.15.1 Background

Section 4.14 of the 2003 LRDP EIR addresses the transportation, circulation, and parking effects of campus growth under the 2003 LRDP. The following discussion summarizes information presented in the ‘Setting’ subsection of Section 4.14 of the 2003 LRDP EIR.

Campus

UC Davis is served by six main campus roadways or “gateways” that connect the campus to residential and downtown areas in the City of Davis, and two gateways that provide direct access to regional freeways (I-80 and SR 113). Circulation within the central campus is accommodated primarily by the campus “loop” roadway system, which includes Russell Boulevard, A Street, New and Old Davis Roads, California Avenue, and La Rue Road. Other roadways within the core campus area are restricted to transit and emergency vehicles, bicyclists, and pedestrians. Primary vehicular access to the south campus is provided by Old Davis Road, to the west campus by Hutchison Drive, and to Russell Ranch by Russell Boulevard.

Level of service (LOS) is a general measure of traffic operating conditions whereby a letter grade, from A (the best) to F (the worst), is assigned to roadway intersections. These grades represent the comfort and convenience associated with driving from the driver’s perspective. To assess the worst-case traffic conditions, LOS is measured during morning (7 to 9 AM) and afternoon (4 to 6 PM) peak commute times. The LOS of campus roadways varies. Monitoring of campus intersections during peak hours in Fall 2001 and Fall 2002 found that the Hutchison Drive/Health Sciences Drive intersection (with LOS E during the PM peak hour) was the only study intersection to operate below the campus' operation standard (standards are identified in the following section). The campus is planning on installing a traffic signal at this intersection by fall 2006.

Bicycles are a major component of the transportation system at UC Davis and in the City of Davis. UC Davis has an extensive system of bicycle paths, which makes bicycles a popular form of travel on campus. The UC Davis Bicycle Plan (UC Davis 2002) estimates that 15,000 to 18,000 bicycles travel to the campus on a typical weekday during the Fall and Spring sessions when the weather is good.

Parking at UC Davis is provided by a combination of surface lots and parking structures. UC Davis Transportation and Parking Services (TAPS) oversees parking services on campus including selling parking passes, providing traffic control at special events, ticketing violators, and measuring parking utilization throughout campus on a quarterly basis. Approximately 14,500 parking spaces were provided on campus as of 2001-02.

Project Site

The project site is accessed from Garrod Drive, and currently has a temporary access road running through the site from Garrod Drive to Parking Lot 56, north of the project site. Parking Lot 50 is adjacent to the site. A small service vehicle parking lot is located northwest of the site; this lot is not open to the public.

7.15.2 2003 LRDP EIR Standards of Significance

The 2003 LRDP EIR considers a transportation, circulation, and parking impact significant if growth under the 2003 LRDP would:
• Cause an increase in the traffic that may be substantial in relation to the existing roadway capacity of the street system as indicated by LOS standards for congestion at intersections.

The addition of project traffic causing a LOS change from acceptable to unacceptable would have a significant impact. The following LOS thresholds apply to the study intersections.

- LOS D is the minimum acceptable LOS for UC Davis.
- LOS E is the minimum acceptable LOS for the City of Davis. LOS F is acceptable for the City of Davis Core Area.
- LOS E is the minimum acceptable LOS for I-80 and its associated interchanges.
- LOS C is the minimum acceptable LOS for SR 113 and its associated interchanges.

In addition, the project would have a significant impact if the project adds 10 or more vehicles to the volume of a study intersection that is expected to operate unacceptably without the project. For intersections that operate unacceptably without the project, even a small amount of additional traffic could increase the delay. For this EIR, future volumes are rounded to the nearest 10; therefore, 10 vehicles is the minimum amount of traffic that could be added to an intersection already operating at an unacceptable level.

Increased intersection congestion would also be a significant impact if it would exceed a LOS standard established by the county congestion management agency (or any affected agency or jurisdiction) for designated roads or highways.

- LOS E is the minimum acceptable LOS for roadways and intersections in Solano County.
- LOS E is the minimum acceptable LOS for I-80 and its associated interchanges between the Solano County limit and Olive Drive.
- LOS E is the minimum acceptable LOS for SR 113 and its associated interchanges within the Davis city limits.
- LOS E is the minimum acceptable LOS for Russell Boulevard between SR 113 and B Street.
- LOS E is the minimum acceptable LOS for Richards Boulevard between First Street and I-80.
- LOS E is the minimum acceptable LOS for First Street between B Street and Richards Boulevard.
- LOS E is the minimum acceptable LOS for B Street between First Street and 5th Street.

• Result in inadequate parking capacity.

For parking, a project would be considered to have a significant impact if it is expected to increase the winter utilization rate to over 90 percent on the central campus, Health Sciences District, and/or major facilities of the west and south campus without adequate time (usually 24 months) to implement a parking solution to campus construction standards.

• Conflict with applicable adopted policies, plans, or programs supporting alternative transportation (e.g., bus turnouts, bicycle racks).
Impacts related to safety risks associated with the UC Davis airport and emergency access are discussed in Section 7.7 Hazards and Hazardous Materials. The 2003 LRDP would make only limited changes to the roadway network and would not create or increase hazards due to design features such as dangerous intersections.

7.15.3 2003 LRDP EIR Impacts and Mitigation Measures

Impacts of campus growth under the 2003 LRDP through 2015-16 on traffic, circulation, and parking are evaluated in Section 4.14 of the 2003 LRDP EIR. As analyzed in Section 4 of this Initial Study, the proposed project is within the scope of analysis in the 2003 LRDP EIR. Significant and potentially significant traffic, circulation, and parking impacts identified in the 2003 LRDP EIR that are relevant to the proposed project are presented below with their corresponding levels of significance before and after application of mitigation measures identified in the 2003 LRDP EIR.

<table>
<thead>
<tr>
<th>2003 LRDP EIR Impacts</th>
<th>Level of Significance Prior to Mitigation</th>
<th>Level of Significance After Mitigation</th>
</tr>
</thead>
<tbody>
<tr>
<td>4.14-1</td>
<td>S</td>
<td>LS</td>
</tr>
<tr>
<td>4.14-3</td>
<td>PS</td>
<td>LS</td>
</tr>
<tr>
<td>4.14-4</td>
<td>PS</td>
<td>LS</td>
</tr>
<tr>
<td>4.14-5</td>
<td>PS</td>
<td>LS</td>
</tr>
</tbody>
</table>

Levels of Significance: LS=Less than Significant, S=Significant, PS=Potentially Significant, SU=Significant and Unavoidable

Mitigation measures in the 2003 LRDP EIR that are applicable to the proposed project are presented below. Since these mitigation measures are already being carried out as part of implementation of the 2003 LRDP, they will not be readopted in this Initial Study. The benefits of these mitigation measures will be achieved independently of considering them as specific mitigation measures of this project. Nothing in this Initial Study in any way alters the obligations of the campus to implement 2003 LRDP EIR mitigation measures.

2003 LRDP EIR Mitigation Measures
TRANSPORTATION, CIRCULATION, & PARKING

| 4.14-1(a) | UC Davis shall continue to actively pursue Transportation Demand Management strategies to reduce vehicle-trips to and from campus. |
| 4.14-1(b) | UC Davis shall continue to monitor AM and PM peak hour traffic operations at critical intersections and roadways on campus. |
| 4.14-1(c) | UC Davis shall review individual projects proposed under the 2003 LRDP as they advance through the environmental clearance phase of development to determine if intersection or roadway improvements are needed with the additional traffic generated by the proposed project. If intersection operations are found to degrade to unacceptable levels, UC Davis shall construct physical improvements such as adding traffic signals or roundabouts at affected study intersections. |
| 4.14-3(a) | UC Davis shall continue to actively pursue Transportation Demand Management strategies to reduce parking demand. |
| 4.14-3(b) | UC Davis shall continue to monitor parking demand on a quarterly basis to identify campus parking areas with a parking utilization over 90 percent. UC Davis shall provide additional parking if a proposed project is expected to increase the winter utilization rate to over 90 percent on the central campus, Health Sciences |
4.14-4 UC Davis shall monitor transit ridership to identify routes operating over capacity with increased campus growth. UC Davis shall work with transit providers to identify additional service required with campus growth or new transit routes needed to serve future development areas.

4.14-5 UC Davis shall monitor core area pedestrian and bike activity and accidents. UC Davis shall improve bike and pedestrian facilities or alter transit operations to avoid increased bicycle accident rates or safety problems.

### 7.15.4 Environmental Checklist and Discussion

<table>
<thead>
<tr>
<th>TRANSPORTATION, CIRCULATION, &amp; PARKING</th>
<th>Potentially Significant Impact</th>
<th>Less than Significant with Mitigation</th>
<th>Impact for which 2003 LRDP EIR is Sufficient</th>
<th>Less than Significant Impact</th>
<th>No Impact</th>
</tr>
</thead>
<tbody>
<tr>
<td>Would the project…</td>
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<tr>
<td>a) Cause an increase in traffic which is substantial in relation to the existing traffic load and capacity of the street system (i.e., result in a substantial increase in either the number of vehicle trips, the volume to capacity ratio on roads, or congestion at intersections)?</td>
<td>☐</td>
<td>☐</td>
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<tr>
<td>b) Exceed, either individually or cumulatively, a level of service standard established by the county congestion management agency for designated roads or highways?</td>
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<td>☐</td>
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<tr>
<td>c) Result in a change in air traffic patterns, including either an increase in traffic levels or a change in location that results in substantial safety risks?</td>
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</tr>
<tr>
<td>d) Substantially increase hazards due to a design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?</td>
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<td>☐</td>
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<tr>
<td>e) Result in inadequate emergency access?</td>
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<td>☐</td>
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<tr>
<td>f) Result in inadequate parking capacity?</td>
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<td>☐</td>
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<td>☐</td>
</tr>
<tr>
<td>g) Conflict with applicable adopted policies, plans, or programs supporting alternative transportation (e.g., bus turnouts, bicycle racks)?</td>
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</tr>
</tbody>
</table>

a,b) Construction of the proposed project would generate vehicle trips on adjacent roadways, entailing periodic deliveries of building materials, construction equipment trips, and construction labor commute trips. At peak construction, estimating a 3:1 carpooling ratio, the project could contribute upwards of 85 additional construction laborer vehicle trips to campus. Most construction equipment would be staged on the project site, and because the geotechnical study calls for over-excavation and compaction, the extra soil (spoil) from excavation would most likely be entirely used on site. Any excess spoil would be hauled to an approved disposal site. In the event that the compaction requires additional off-site soil, haul trucks would travel to the project site in order to bring the extra material. During the period of concrete pours, there would be frequent trips by concrete pouring trucks. Occupancy of the project would not add any members to the campus population, so the project would not contribute to increased commuting trips to and from the campus. There would be more vehicle trips to the Health Sciences District associated with the proposed project, and in particular, there would be more delivery trips as a result of the Veterinary Medicine Storehouse moving from Haring Hall to the proposed project.
building. Concomitantly, delivery vehicle trips would be reduced on the core campus with the relocation of the Storehouse. There would not be an increase in the total number of delivery trips associated with the Storehouse, and there could be a decrease in the total number of delivery trips if the Storehouse reduces its store size and volume of products offered for sale. The most direct access to the project site for trucks would be from Hutchison Drive east of SR 113, or from the campus loop and Garrod Drive.

The 2003 LRDP EIR found that implementation of the 2003 LRDP, including the proposed project, would cause unacceptable intersection operations at on-campus intersections (Impact 4.14-1). The project could result in changes to intersection operations based on different on-campus travel patterns, but it is anticipated that overall trips would not increase. Therefore, the project is not anticipated to additionally contribute to unacceptable intersection operations at on-campus intersections. To ensure that any possible changes in travel behavior have minimal impact, LRDP Mitigation 4.14-1(a-c) is included in the proposed project, and requires that the campus continue to pursue Transportation Demand Management strategies to reduce vehicle-trips, monitor peak hour traffic operations at critical locations, review individual projects to determine if intersection operations will degrade to unacceptable levels, and implement physical improvements when intersection operations degrade. The 2003 LRDP EIR found that additional vehicle trips under the 2003 LRDP would cause the LOS at ten on-campus intersections to drop below acceptable levels. With implementation of measures identified in the 2003 LRDP EIR, the impact associated with the project’s possible contribution to degraded on-campus intersection operations would be less than significant.

The 2003 LRDP EIR also identified that implementation of the 2003 LRDP would cause unacceptable intersection and freeway operations off-campus (Impact 4.14-2). Because the project would not increase the campus population, and deliveries now made to central campus for the veterinary medicine program would just shift to the Health Sciences District, but would not become more frequent, the project would not change existing intersection and freeway operations off-campus. No impact would occur to off-campus intersection and freeway operations.

c) Impacts related to safety risks associated with the UC Davis airport are discussed in Section 7.7, Hazards and Hazardous Materials.

d) In 2007-08, the Health Sciences District Landscape, Circulation and Parking (HSDLCP) project will build a loop road off of Hutchison Drive, immediately west of the stadium, which accesses Parking Lot 56 in the northern area of the Health Sciences District. This loop road will assume the function of the temporary Parking Lot 56 access road that runs north-south through the proposed project site. The HSDLCP project is in construction, and completion is anticipated by spring 2008. The proposed project would not start construction until fall 2008. The project would pave a fire lane on the north side of the project to provide safety vehicle access. The project would also install a loading dock driveway off of Garrod Drive; this driveway would be designed to minimize traffic conflicts. The proposed project would include a possible future realignment of Garrod Drive, which would be reconstructed to align with the top of Parking Lot 50 (see Figure 3.3 in Section 3, Project Description), and a possible future new bicycle undercrossing on the north and east sides of the project. The realignment and bike undercrossing are being considered part of the project, but funding for these elements has not been finalized, therefore the realignment and undercrossing could be implemented concurrent with the proposed building or be implemented at a later date. Appropriate safety controls would be designed into both elements to minimize traffic hazards. The 2003 LRDP EIR identified that growth under the 2003 LRDP would increase conflicts between bicyclists, pedestrians, and transit vehicles on the core campus, resulting in increased congestion and safety problems (Impact 4.14-5). LRDP Mitigation 4.14-5, included in the proposed project, requires UC Davis to continue to monitor pedestrian and bike activity and accidents on the core campus, and to improve bike and
pedestrian facilities or alter transit operations to reduce accident rates or safety problems. With this mitigation, the impact would be less than significant.

The project would include a loading dock, and would construct a driveway from the Garrod Drive entry road to Parking Lot 50 to access the loading dock. The access driveway would be designed to work with either the existing road configuration or the planned realignment of Garrod Drive. There would be regular service vehicle and small panel van trips to the project facility, and semi-truck deliveries approximately once per month. Appropriate safety controls would be designed into the project to ensure pedestrian, bicycle, and vehicular safety in the vicinity of the loading dock access.

e) Impacts related to emergency access are discussed in Section 7.7, Hazards and Hazardous Materials.

f) The 2003 LRDP EIR identified that implementation of the 2003 LRDP would create additional parking demand (Impact 4.14-3). The proposed project would not add to the campus population, but it would relocate members of the campus population from the core campus to the Health Sciences District. Some of the members who drive would likely change their parking habits from central campus lots and structures to lots in the Health Sciences District. The immediately adjacent lots to the project site, Lots 50 and 55, had utilization rates of 100% and 89%, respectively, and would not be able to absorb any additional demand. However, Parking Lots 56 and 57 in the Health Sciences District had fall 2006 utilization rates of 66% and 40%, respectively, and have spaces available to meet changes in parking habits. Parking is provided for campus districts, and parking utilization rates are considered for these districts of campus, one of which is the Health Sciences District. Currently, Health Sciences District utilization rates overall are low enough to absorb possible changes in parking habits in the District. In compliance with LRDP Mitigation 4.14-3(a-b), which will be implemented as part of the proposed project, the campus will: continue to pursue Transportation Demand Management strategies to reduce parking demand; monitor parking demand on a quarterly basis; and provide additional parking if a proposed project is expected to increase winter parking utilization rates over 90 percent on the central campus, at the Health Sciences District, and/or at major facilities on the west or south campuses. With implementation of measures identified in the 2003 LRDP EIR, this impact would be less than significant.

g) A bicycle undercrossing near Schaal Aquatic Center serves cyclists traveling from core campus, enabling them to travel to the Health Sciences District, including to the proposed project site. In addition, bike lanes along Hutchison Boulevard have been recently upgraded between County Road 98 and SR 113, and the bike lanes will be improved between SR 113 and La Rue Road during summer 2007 as part of the Health Sciences District Landscape, Circulation and Parking (HSDLCP) project, which is started construction in January 2007. The Unitrans H line serves the Health Sciences District once per hour, and runs between the Silo, in the core of campus, to a stop on La Rue Road at the eastern edge of the District. The UC Davis/UC Davis Medical Center Shuttle offers transit service from the UC Davis Medical Center in Sacramento to UC Davis, with a stop in the Health Sciences District, and runs once per hour. This shuttle is used as a commuter resource by staff, faculty and students in the UC Davis system. When the HSDLCP project is completed, Yolo Bus will resume transit services to the Health Sciences District, and Fairfield Suisun Transit is considering adding service to the District, as well. The proposed project would not add members to the campus population and would not contribute to an overall demand for commuting transit services. The project would relocate members of the campus population to the Health Sciences District, and that could contribute to added demand for intercampus transit. The 2003 LRDP EIR identified that growth under the 2003 LRDP would increase demand for transit services (LRDP Impact 4.14-4), and that an impact could result if development under the 2003 LRDP could cause conflicts with applicable adopted policies, plans, or programs supporting
alternative transportation. LRDP Mitigation 4.14-4, included in the proposed project, requires the
campus to monitor transit ridership to identify routes that operate over capacity and work with
transit providers to identify additional service needed to serve future growth. With
implementation of this measure, the impact would be less than significant.

Summary

Mitigation measures 4.14-1(a-c), 4.14-3(a-b), 4.14-4, and 4.14-5 from the 2003 LRDP EIR are
relevant to the proposed project and reduce the significance of transportation, circulation, and
parking impacts to the extent feasible. The proposed project would not exceed the levels of
significance of transportation, circulation, and parking impacts previously addressed in the 2003
LRDP EIR, nor would it introduce any new significant impacts that were not previously
addressed.
7.16 Utilities & Service Systems

7.16.1 Background

Section 4.15 of the 2003 LRDP EIR addresses the effects of campus growth on utility systems under the 2003 LRDP. The campus provides the following utility and service systems to campus projects:

- Domestic/Fire Water
- Utility Water
- Agricultural Water
- Storm Drainage
- Wastewater
- Solid Waste
- Chilled Water
- Natural Gas
- Electricity
- Telecommunications

The campus is required to comply with a UC-wide green building policy and clean energy standard. The policy encourages principles of energy efficiency and sustainability in the planning, financing, design, construction, renewal, maintenance, operation, space management, facilities utilization, and decommissioning of facilities and infrastructure to the extent possible, consistent with budgetary constraints and regulatory and programmatic requirements. In addition, the policy aims to minimize increased use of non-renewable energy by encouraging programs addressing energy efficiency, local renewable power and green power purchases from the electrical grid (UC Office of the President 2003).

Project Site

The proposed project would connect to campus utilities and service systems including: domestic water, utility water, wastewater, storm drainage, solid waste, chilled water/steam, electricity, natural gas, and telecommunications. These utilities and service systems are discussed below:

- **Domestic Water:** The campus' domestic/fire water system obtains water from six deep aquifer wells to serve the needs of campus buildings, landscape irrigation on the west and south campuses, and heating and cooling systems at the Central Heating and Cooling Plant (CHCP). The system includes approximately 144,000 linear feet of distribution pipelines, a water tower and a ground storage tank with a combined capacity of approximately 500,000 gallons, an underground storage reservoir with a capacity of approximately 1.3 million gallons, and a booster pump station. In 2001-02, annual domestic water consumption was approximately 2,670 acre feet and peak demand was 3,100 gpm. The project would install a new domestic water line to the south of the building, with one connection point on the existing water main to the east of the project site and the other connection point to an existing line west of the project site. The project would install two new fire hydrants, subject to review and approval by the UC Davis Fire Department. Estimated project demand is 19.0 gpm for domestic usage, 750 gpm for fire sprinklers, and 2,500 gpm for fire water. The campus Draft Domestic Water Master Plan indicates sufficient capacity and pressure in the distribution system to support the project.

- **Utility Water:** The campus' utility water system obtains water from six intermediate-depth aquifer wells to provide water for landscape irrigation, greenhouse irrigation, and some laboratories. The system includes one 100,000-gallon water tower. In 2001-02, annual utility water consumption was approximately 1,170 acre feet and peak demand was 1.5 mgd. The project would connect to an existing utility water pipe east of the project site. The project is estimated to have a peak demand of 40 gpm. The campus Utility Water Master Plan indicates sufficient capacity and pressure to serve the project.
• **Wastewater:** UC Davis operates a campus wastewater conveyance and treatment system that is independent from regional facilities. The campus Wastewater Treatment Plant (WWTP) is located in the south campus, and treated effluent from the plant discharges to Putah Creek. The peak month capacity of the campus WWTP, as regulated under the existing NPDES permit issued by the CVRWQCB, is 2.7 mgd. Since the current WWTP began operation in March 2000, the maximum monthly flow has been 2.2 mgd. Maximum flow in 2001-02 was 1.6 mgd. The proposed point of connection for the project is at a manhole on the existing 12” line to the east of the project site. Estimated project demand is 22,800 gallons per day. System capacity is adequate in the collection system to service the project.

• **Storm Drainage:** The central campus and developed parts of the west and south campuses are served by campus storm water drainage systems. The central campus drainage system involves a system of underground pipes that drain to the Arboretum Waterway (providing the only major detention storage in the system), from which storm water is pumped to the South Fork of Putah Creek during large storm events. Project site runoff enters storm drain inlets that drain to the Arboretum Waterway. Existing drain inlets on the southern portion of the site would require relocation in order to accommodate the proposed building. With respect to on-site storm water runoff management, a bioswale is proposed on the southern side of the building to handle some of the runoff generated by the new building and paving. The bioswale would slow the runoff rate and provide some pollutant filtration and soil percolation of runoff, before discharging remaining unpercolated water into the storm drain collection system. All other site runoff that could not be managed by the bioswale would be collected in the storm drain system and piped to the Arboretum, in the same manner that most other storm water on campus is currently managed. In addition, a 24-inch storm drain pipe runs north-south through the project site where the building footprint is planned. The pipe collects and channels a “subwatershed” within the Health Sciences District of approximately 11 acres. With respect to the storm water “subwatershed” managed by that pipe, the project would study opportunities to handle the storm water through overland solutions to provide more percolation and use of storm water. If the study determines that such solutions prove infeasible, the project would relocate the pipe around the building.

• **Solid Waste:** UC Davis provides solid waste collection and recycling services for the campus. All nonrecycled and nonhazardous solid wastes collected on campus are disposed at the campus owned and operated Class III sanitary landfill located in the west campus west of County Road 98 and north of Putah Creek. The campus sends approximately 8,700 tons of solid waste to the campus landfill per year (approximately 34 tons per working day). In addition, approximately 3,300 tons of wastes from the UC Davis Medical Center in Sacramento are disposed at the landfill each year. The permitted capacity of the landfill is 500 tons per day, and the landfill unit currently being used has anticipated capacity to serve the campus needs through 2023. In 2001-02, approximately 10,804 tons of materials were diverted for recycling and reuse. The amount of materials diverted represents approximately 55 percent of the total waste generated on campus.

• **Electricity:** The main campus currently receives electricity from the Western Area Power Administration (WAPA) through PG&E transmission lines at the campus substation located south of I-80. The campus electrical system has an available capacity of 64.4 megawatts (MW). Annual electrical usage on campus in 2001-02 was approximately 200 million kilowatt-hours (KWh) per year and peak demand was approximately 34,000 KW. The proposed point of connection is at the existing pull box located northwest of the project site. New conduits would be installed from the pull box to the project, and a new switch would be required of the project. Based on the projected peak load demand (2,000kVA) of the project, cable would need to be pulled from the Garrod Drive switchgear, to the southwest of the project site. According to the January 2004 Infrastructure report, the project would require the completion of the Electrical Improvements, Phase 3 (E13) project (approved in December...
in order to be able to meet electrical service demands. The EI3 project is estimated to complete construction in 2008, which is two years in advance of the proposed project construction completion and occupancy.

- **Natural Gas**: The campus purchases natural gas from outside vendors and provides it to the campus facilities through PG&E pipelines. Natural gas is provided to four locations on campus for use and distribution: the CHCP, the Primate Center Plant, the Cogeneration Plant, and the Master Meter #1. Peak natural gas demand in 2001-02 was approximately 2,900 therms per hour. The proposed point of connection for the project is at an existing tap to the east. The gas line would be stubbed in to the building, but no lab connections would be made, as the expected users of the building will not have any immediate needs for natural gas use.

- **Chilled Water & Steam**: The campus chilled water and steam systems produce and convey steam to provide heat and chilled water to cool several buildings on the central campus. Campus buildings that are not connected to the campus chilled water and steam systems use individual heating, ventilation, and air conditioning (HVAC) systems. The campus operates two main chilled water plants (the CHCP and the Thermal Energy Storage Plant) with a total system capacity of approximately 15,500 tons. The campus’ main steam plant is located in the CHCP. The total steam capacity at the CHCP is approximately 280,000 pounds per hour (pph) (including a 75,000 pph backup boiler for use in emergencies). The proposed point of connection for chilled water is on the existing 20” chilled water main line located just to the south of the project site. The project is anticipated to demand approximately 450 tons, and computer modeling demonstrated adequate pressure and supply in the system to support the project with no additional improvements. The proposed point of connection for steam is at an existing steam manhole in the utility corridor to the east of the project. The anticipated demand of the project is approximately 6,000 pounds/hour. In order to meet this demand and other demand in the district for steam service, the project would loop the system in the district, which is currently served only by a long line. The loop line would be trenched to the north of the project site, from Dairy Road, across La Rue Road, along the southern edge of the Multi-use Stadium site. With this loop, the steam system would have adequate capacity to serve the project.

- **Telecommunications**: The majority of all telephone, data, video, and wireless infrastructure and facilities on campus are owned by the campus and operated by the UC Davis Communications Resources Department. The main campus switching facility is located in the Telecommunications Building. As new buildings are constructed, the Communications Resources Department coordinates with the UC Davis Office of Architects and Engineers to design and direct the installation of intra- and inter-building telecommunications facilities in accordance with established standards. The proposed point of connection is at a manhole immediately southwest of the project site. New conduits would be installed from this manhole to the proposed Veterinary Medicine 3B telecommunications room. Service would be provided through the area distribution frame (ADF) for the Health Sciences District. Capacity is available at both the ADF and the central system for the proposed project.

### 7.16.2 2003 LRDP EIR Standards of Significance

The 2003 LRDP EIR considers a utilities and service systems impact significant if growth under the 2003 LRDP would:

- Exceed the Central Valley Regional Water Quality Control Board’s wastewater treatment requirements.
- Require or result in the construction or expansion of water or wastewater treatment facilities, which would cause significant environmental effects.
- Require or result in the construction or expansion of storm water drainage facilities, which could cause significant environmental effects.
- Result in the need for new or expanded water supply entitlements.
- Exceed available wastewater treatment capacity.
- Be served by a landfill with insufficient permitted capacity to accommodate the project’s solid waste disposal needs.
- Fail to comply with applicable federal, state, and local statutes and regulations related to solid waste.
- Require or result in the construction or expansion of electrical, natural gas, chilled water, or steam facilities, which would cause significant environmental impacts.
- Require or result in the construction or expansion of telecommunication facilities, which would cause significant environmental impacts.

### 7.16.3 2003 LRDP EIR Impacts and Mitigation Measures

Impacts of campus growth under the 2003 LRDP through 2015-16 on utilities and service systems are evaluated in Section 4.15 of the 2003 LRDP EIR. As analyzed in Section 4 of this Initial Study, the proposed project is within the scope of analysis in the 2003 LRDP EIR. Significant and potentially significant utilities and service systems impacts identified in the 2003 LRDP EIR that are relevant to the proposed project are presented below with their corresponding levels of significance before and after application of mitigation measures identified in the 2003 LRDP EIR. In addition, impacts 4.15-1, 4.15-2, 4.15-3, 4.15-4, 4.15-6, 4.15-8, and 4.15-9, presented below, are considered less than significant prior to mitigation, but mitigation measures were identified in the 2003 LRDP EIR to further reduce the significance of these impacts. Less than significant impacts that do not include mitigation are not presented here.

<table>
<thead>
<tr>
<th>2003 LRDP EIR Impacts Utilities &amp; Service Systems</th>
<th>Level of Significance Prior to Mitigation</th>
<th>Level of Significance After Mitigation</th>
</tr>
</thead>
<tbody>
<tr>
<td>4.15-1 Implementation of the 2003 LRDP would require the expansion of campus domestic/fire water extraction and conveyance systems, which would not cause significant environmental impacts.</td>
<td>LS</td>
<td>LS</td>
</tr>
<tr>
<td>4.15-2 Implementation of the 2003 LRDP would require the expansion of campus utility water extraction and conveyance systems, which would not cause significant environmental impacts.</td>
<td>LS</td>
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<tr>
<td>4.15-3 Implementation of the 2003 LRDP would require the expansion of wastewater treatment and conveyance facilities, the construction and operation of which would not result in significant environmental impacts.</td>
<td>LS</td>
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</tr>
<tr>
<td>4.15-4 Implementation of the 2003 LRDP would require the expansion of campus storm drainage conveyance and detention facilities, which would not result in significant environmental impacts.</td>
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<tr>
<td>4.15-6 Implementation of the 2003 LRDP would require the expansion of the campus electrical system, which would not result in significant adverse environmental impacts.</td>
<td>LS</td>
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<tr>
<td>2003 LRDP EIR Impacts</td>
<td>Level of Significance Prior to Mitigation</td>
<td>Level of Significance After Mitigation</td>
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<tr>
<td>UTILITIES &amp; SERVICE SYSTEMS</td>
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<tr>
<td>4.15-8</td>
<td>Implementation of the 2003 LRDP would require the expansion of campus chilled water and steam generation and conveyance facilities, which would not result in significant environmental impacts.</td>
<td>LS</td>
</tr>
<tr>
<td>4.15-9</td>
<td>Implementation of the 2003 LRDP would require expansion of campus communication facilities, which would not result in significant environmental impacts.</td>
<td>LS</td>
</tr>
</tbody>
</table>

Levels of Significance: LS=Less than Significant, S=Significant, PS=Potentially Significant, SU=Significant and Unavoidable

Mitigation measures in the 2003 LRDP EIR that are applicable to the proposed project are presented below. Since these mitigation measures are already being carried out as part of implementation of the 2003 LRDP, they will not be readopted in this Initial Study. The benefits of these mitigation measures will be achieved independently of considering them as specific mitigation measures of this project. Nothing in this Initial Study in any way alters the obligations of the campus to implement 2003 LRDP EIR mitigation measures.

| 2003 LRDP EIR Mitigation Measures | ----------------------------------------|---------------------------------------|
| UTILITIES & SERVICE SYSTEMS | ----------------------------------------|---------------------------------------|
| 4.15-1(a) | Once preliminary project design is developed, the campus shall review each project to determine if existing domestic/fire water supply is adequate at the point of connection. If domestic/fire water is determined inadequate, the campus will upgrade the system to provide adequate water flow and pressure to the project site before constructing the project. | |
| 4.15-1(b) | Implement domestic water conservation strategies as indicated in LRDP Mitigation 4.8-5(a) (see Section 7.8 Hydrology and Water Quality of this Tiered Initial Study). | |
| 4.15-2(a) | Once preliminary project design is developed, the campus shall review each project to determine whether existing utility water supply is adequate at the point of connection. If the utility water supply is determined to be inadequate, the campus will upgrade the system to provide adequate water flow to the project site prior to occupation or operation. | |
| 4.15-2(b) | Implement utility water conservation strategies as indicated in LRDP Mitigation 4.8-6(a) (see Section 7.8 Hydrology and Water Quality of this Tiered Initial Study). | |
| 4.15-3 | Once preliminary project design is developed, the campus shall review each project to determine whether existing capacity of the sanitary sewer line at the point of connection is adequate. If the capacity of the sewer line is determined inadequate, the campus will upgrade the system to provide adequate service to the project site prior to occupation or operation. | |
| 4.15-4 | Once preliminary project design is developed, the campus shall review each project to determine whether existing storm drainage system is adequate at the point of connection. If the storm drainage system is determined inadequate, the campus will upgrade the system to provide adequate storm water drainage and/or detention prior to occupation or operation. | |
| 4.15-6(a) | Once preliminary project design is developed, the campus shall review each project to determine whether the existing electrical system is adequate at the point of connection. If the electrical system is determined inadequate, the campus will upgrade the system to provide adequate service to the project prior to occupation or operation. | |
| 4.15-6(b) | The campus would continue to meet or exceed Title 24 energy conservation requirements for new buildings, and it would continue to incorporate energy efficient design elements outlined in the UC Davis Campus Standards & Design Guide in new construction and retrofit projects. These energy conservation standards may be subject to modification as more stringent standards are developed. | |
| 4.15-8 | Once preliminary project design is developed, the campus shall review each project to determine whether existing capacity of the chilled water and/or steam system at the point of connection is adequate. If the capacity of the pipelines is determined inadequate, the campus will upgrade the system to provide adequate | |
2003 LRDP EIR Mitigation Measures

service to the project site prior to occupation or operation.

4.15-9 Once preliminary project design is developed, the campus shall review each project to determine whether existing capacity of the telecommunications system is adequate. If the capacity is determined to be inadequate, the campus will upgrade the system to provide adequate service to the project site prior to occupation or operation.

7.16.4 Environmental Checklist and Discussion

<table>
<thead>
<tr>
<th>UTILITIES &amp; SERVICE SYSTEMS</th>
<th>Potentially Significant Impact</th>
<th>Less than Significant with Mitigation</th>
<th>Impact for which 2003 LRDP EIR is Sufficient</th>
<th>Less than Significant Impact</th>
<th>No Impact</th>
</tr>
</thead>
<tbody>
<tr>
<td>Would the project…</td>
<td></td>
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<tr>
<td>a) Exceed wastewater treatment requirements of the applicable Regional Water Quality Control Board?</td>
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<tr>
<td>b) Require or result in the construction of new water or wastewater treatment facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?</td>
<td>☐</td>
<td>☐</td>
<td>☑</td>
<td>☐</td>
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</tr>
<tr>
<td>c) Require or result in the construction of new storm water drainage facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?</td>
<td>☐</td>
<td>☐</td>
<td>☑</td>
<td>☐</td>
<td>☐</td>
</tr>
<tr>
<td>d) Have sufficient water supplies available to serve the project from existing entitlements and resources, or are new or expanded entitlements needed?</td>
<td>☐</td>
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<td>☑</td>
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</tr>
<tr>
<td>e) Result in a determination by the wastewater treatment provider which serves or may serve the project that it has adequate capacity to serve the project's projected demand in addition to the providers existing commitments?</td>
<td>☐</td>
<td>☐</td>
<td>☑</td>
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<tr>
<td>f) Be served by a landfill with sufficient permitted capacity to accommodate the project's solid waste disposal needs?</td>
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<td>☐</td>
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<tr>
<td>g) Comply with federal, state, and local statutes and regulations related to solid waste?</td>
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<td>☐</td>
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<tr>
<td>h) Require or result in the construction or expansion of electrical, natural gas, chilled water, or steam facilities, which would cause significant environmental impacts?</td>
<td>☐</td>
<td>☐</td>
<td>☑</td>
<td>☐</td>
<td>☐</td>
</tr>
<tr>
<td>i) Require or result in the construction or expansion of telecommunication facilities, which would cause significant environmental impacts?</td>
<td>☐</td>
<td>☐</td>
<td>☑</td>
<td>☐</td>
<td>☐</td>
</tr>
</tbody>
</table>

a) The proposed project would not increase the campus population, would relocate members from central campus to the Health Sciences District and would renovate existing central campus space from wet lab to dry lab space. However, the project would construct wet labs and restrooms, which could result in a slight increase in effluent. Estimated project demand is 22,800 gallons per day. The permitted peak monthly average capacity of the campus WWTP is currently 2.7 mgd, and growth under the 2003 LRDP, including the proposed project, is anticipated to increase the volume of discharge to 3.85 mgd through 2015-16. As discussed further in item “a,f” in Section
7.8, Hydrology and Water Quality, with continuation of current practices and implementation of 2003 LRDP EIR mitigation measures, the campus anticipates meeting the WWTP’s permit requirements. Therefore, the impact associated with possible exceedances of WWTP requirements would be less than significant.

b) Domestic Water Facilities

The project would install a new domestic water line to the south of the building, with one connection point on the existing water main to the east of the project site and the other connection point to an existing line west of the project site. The project would install two new fire hydrants, subject to review and approval by the UC Davis Fire Department. Estimated project demand is 19.0 gallons per minute (gpm) for domestic usage, 750 gpm for fire sprinklers, and 2,500 gpm for fire water. The 2003 LRDP EIR identified that campus development under the 2003 LRDP would require the expansion of campus domestic/fire water extraction and conveyance systems, the construction of which would not cause significant environmental impacts (LRDP Impact 4.15-1). The campus would survey the site before construction and perform monitoring during construction (in compliance with 2003 LRDP Mitigations 4.4-1 and 4.5-1) to avoid inadvertent biological and cultural resource impacts associated with constructing the domestic water lines for the project. Therefore, effects associated with domestic water utility extensions would be less than significant. LRDP Mitigation 4.15-1(a-b), included in the proposed project, would further reduce the significance of this impact by requiring the water conservation strategies outlined in LRDP Mitigation 4.8-5(a) (see Hydrology and Water Quality section) and by requiring the campus to review the project to determine if the domestic/fire water supply is adequate at the point of connection and if any upgrades to the system are required. The utility study found that the domestic water supply has adequate capacity to support the project.

Utility Water Facilities

The project would connect to an existing utility water pipe east of the project site. The project is estimated to have a peak demand of 40 gpm. The 2003 LRDP EIR identified that campus development under the 2003 LRDP would require the expansion of campus utility water extraction and conveyance systems, the construction of which would not cause significant environmental impacts (LRDP Impact 4.15-2). The campus would survey the site before construction and perform monitoring during construction (in compliance with 2003 LRDP Mitigations 4.4-1 and 4.5-1) to avoid inadvertent biological and cultural resource impacts associated with constructing the utility water line for the project. Therefore, effects associated with domestic water utility extensions would be less than significant. LRDP Mitigation 4.15-2(a-b), included in the proposed project, would further reduce the significance of this impact by requiring the water conservation strategies outlined in LRDP Mitigation 4.8-6(a) (see Hydrology and Water Quality section) and by requiring the campus to review the project to determine if the utility water supply is adequate at the point of connection and if any upgrades to the system are required. The campus Utility Water Master Plan indicates sufficient capacity and pressure to serve the project.

Wastewater Facilities

The proposed project would not increase the campus population, would relocate members from central campus to the Health Sciences District and would renovate existing central campus space from wet lab to dry lab space. However, the project would construct wet labs and restrooms, which could result in a slight increase in effluent. Estimated project demand is 22,800 gallons per day. The proposed point of connection for the project is at a manhole on the existing 12” line to the east of the project site. The 2003 LRDP EIR identified that implementation of the 2003 LRDP, including the proposed project, would require the expansion of campus wastewater treatment and conveyance facilities, the construction and operation of which would not result in significant
environmental impacts (Impact 4.15-3). Future expansion of the existing WWTP and installation of new sanitary sewer conveyance lines would primarily occur on previously disturbed ground. In addition, the campus would survey the site before construction and perform monitoring during construction (in compliance with 2003 LRDP Mitigations 4.4-1 and 4.5-1) to avoid inadvertent biological and cultural resource impacts. Therefore, this impact would be less than significant. LRDP Mitigation 4.15-3, included in the proposed project, would further reduce the significance of this impact by ensuring the campus practice of reviewing projects to determine if there is adequate capacity to provide sanitary sewer service, and to upgrade the system as necessary. System capacity is adequate in the collection system to service the project.

c) Project site runoff enters storm drain inlets that drain to the Arboretum Waterway. Existing drain inlets on the southern portion of the site would require relocation in order to accommodate the proposed building. With respect to on-site storm water runoff management, a bioswale is proposed on the southern side of the building to handle some of the runoff generated by the new building and paving. The bioswale would slow the runoff rate and provide some pollutant filtration and soil percolation of runoff, before discharging remaining unpercolated water into the storm drain collection system. All other site runoff that could not be managed by the bioswale would be collected in the storm drain system and piped to the Arboretum, in the same manner that most other storm water on campus is currently managed. In addition, a 24-inch storm drain pipe runs north-south through the project site where the building footprint is planned. The pipe collects and channels a “subwatershed” within the Health Sciences District of approximately 11 acres. With respect to the storm water “subwatershed” managed by that pipe, the project would study opportunities to handle the storm water through overland solutions to provide more percolation and use of storm water. If the study determines that such solutions prove infeasible, the project would relocate the pipe around the building. The 2003 LRDP EIR identified that implementation of the 2003 LRDP would require the expansion of storm drainage conveyance and detention facilities, the construction and operation of which would not result in significant environmental impacts (Impact 4.15-4). In addition, the campus would survey the site before construction and perform monitoring during construction (in compliance with 2003 LRDP Mitigations 4.4-1 and 4.5-1) to avoid inadvertent biological and cultural resource impacts. LRDP Mitigation 4.15-4, included in the proposed project, would further reduce this less-than-significant impact by ensuring the campus practice of reviewing projects to determine if there is adequate capacity to provide storm water drainage service for the proposed project, and to upgrade the system as necessary.

d) As described in item b) above in this section, the typical daily project demand for domestic water is estimated to be 19 gpm, and utility water (for irrigation) is estimated to be 40 gpm. Impacts associated with the project’s demand for water from the deep and shallow/intermediate aquifers are addressed in item (b) in Section 7.8, Hydrology and Water Quality. As addressed, mitigation measures would be implemented under the 2003 LRDP to reduce the campus’ demand for domestic/fire and utility water, to monitor impacts on the groundwater aquifers, and to manage water sources if impacts on the aquifers are identified. However, regardless of mitigation, because the effects of increased groundwater extraction are not currently well understood, impacts of increased water use are considered significant and unavoidable (LRDP Impacts 4.8-5 and 4.8-6). These impacts were adequately analyzed in the 2003 LRDP EIR and fully addressed in the Findings and Statement of Overriding Considerations adopted by The Regents in connection with its approval of the 2003 LRDP. No conditions have changed and no new information has become available since certification of the 2003 LRDP EIR that would alter this previous analysis.

e) The campus’ WWTP would provide wastewater treatment for the proposed project. As discussed in item (b) above, LRDP Mitigation 4.15-3, included in the proposed project, would ensure the campus practice of reviewing projects to determine if there is adequate capacity to provide
sanitary sewer service, and to upgrade the system as necessary. System capacity is adequate in the collection system to service the project. Therefore, this impact would be less than significant.

f) The waste disposal needs of the proposed project would be served by the campus landfill. Certain construction waste materials are recycled or salvaged as required by the campus' standard construction contract specifications. The proposed project would not increase the campus population, therefore, little or no increase in waste generation and disposal is expected to occur as a result of operating the project. The project would generate typical solid waste. Biohazardous waste would be treated separately, as described above in Section 7.7.4, item a) discussion on Biohazardous Materials. As identified in the 2003 LRDP EIR, given the demands anticipated under the 2003 LRDP (including the proposed project), the life expectancy of the campus landfill is to 2023. Therefore, the campus landfill would have adequate capacity to serve the proposed project and the impact would be less than significant.

g) As described above in Section 7.7.4, item a) discussion on Biohazardous Materials, all biohazardous waste would be disposed of according to campus hazardous waste management procedures. The proposed project would comply with all applicable statutes and regulations related to solid waste. Therefore, no impact would occur.

h) The utility evaluation for the proposed project considered provision of electrical, chilled water, steam, and natural gas services for the project.

**Electricity.** The proposed point of connection is at an existing pull box located northwest of the project site. New conduits would be installed from the pull box to the project, and a new switch would be required of the project. Based on the projected peak load demand (2,000kVA) of the project, cable would need to be pulled from the Garrod Drive switchgear, to the southwest of the project site. According to the January 2004 Infrastructure report, the project would require the completion of the Electrical Improvements, Phase 3 (EI3) project (approved in December 2005, State Clearinghouse #2005092018) in order to be able to meet electrical service demands. The EI3 project is estimated to complete construction in 2008, which is two years in advance of the proposed project construction completion and occupancy.

**Chilled Water.** The proposed point of connection for chilled water is on the existing 20” chilled water main line located just to the south of the project site. The project is anticipated to demand approximately 450 tons, and computer modeling demonstrated adequate pressure and supply in the system to support the project with no additional improvements.

**Steam.** The proposed point of connection for steam is at an existing steam manhole in the utility corridor to the east of the project. The anticipated demand of the project is approximately 6,000 pounds/hour. In order to meet this demand and other demand in the district for steam service, the project would loop the system in the district, which is currently served only by a long line. The loop line would be trenched to the north of the project site, from Dairy Road, across La Rue Road, along the southern edge of the Multi-use Stadium site. With this loop, the steam system would have adequate capacity to serve the project.

**Natural Gas.** The proposed point of connection for the project is at an existing tap to the east. The gas line would be stubbed in to the building, but no lab connections would be made, as the expected users of the building will not have any immediate needs for natural gas use.

The 2003 LRDP EIR identified that growth under the 2003 LRDP would require the expansion of the campus electrical system and campus steam system (LRDP Impacts 4.15-6, and 4.15-8). Portions of the electrical and steam utility extensions required by the proposed project would be constructed within existing right-of-ways and previously disturbed areas. In addition, the campus
would survey the site before construction and perform monitoring during construction (in compliance with 2003 LRDP Mitigations 4.4-1 and 4.5-1) to avoid inadvertent biological and cultural resource impacts. Therefore, environmental effects associated with utility extensions would be less than significant. LRDP Mitigations 4.15-6(a,b) and 4.15-8, included in the proposed project, would further reduce the significance of this impact by requiring the campus to continue to incorporate energy efficient design elements, meet or exceed Title 24 energy conservation requirements, and review the project to determine if the relevant utility supply is adequate at the point of connection and if any upgrades to the utility system are required. The Regent's Policy on Green Building Design and Clean Energy Standards, adopted July 17, 2003, set a goal for all new building projects, other than acute-care facilities, approved after the 2004-05 fiscal year, to outperform the required provisions of the California Energy Code (Title 24) energy-efficiency standards by at least 20 percent. The proposed project anticipates exceeding California Title 24 energy efficiency requirements by approximately 25-35%. The project would achieve such efficiency through offsetting electric lighting with natural daylight, radiant heating and cooling supplemented with operable windows in the office areas, chilled beam cooling in the labs and internal spaces and high-efficiency supply and exhaust fans.

i) The proposed point of connection for telecommunications is at a manhole immediately southwest of the project site. New conduits would be installed from this manhole to the proposed Veterinary Medicine 3B telecommunications room. Service would be provided through the area distribution frame (ADF) for the Health Sciences District. The 2003 LRDP EIR identified that growth under the 2003 LRDP would require the expansion of the campus telecommunications system, which would not result in significant environmental impacts (LRDP Impact 4.15-9). Telecommunication extensions required by the proposed project would be constructed within a previously disturbed area. In addition, the campus would survey the site before construction and perform monitoring during construction (in compliance with 2003 LRDP Mitigations 4.4-1 and 4.5-1) to avoid inadvertent biological and cultural resource impacts. Therefore, environmental effects associated with utility extensions would be less than significant. LRDP Mitigation 4.15-9, included in the proposed project, would further reduce the significance of this impact by requiring the campus to determine if the telecommunication capacity is adequate at the point of connection and if any upgrades to the system are required. The utility study for the proposed project indicated that capacity is available at both the ADF and the central system for the proposed project.

Summary

Mitigation measures 4.15-1(a-b), 4.15-2(a-b), 4.15-3, 4.15-4, 4.15-6(a-b), 4.15-8, and 4.15-9 from the 2003 LRDP EIR are relevant to the proposed project and reduce the significance of utility and service system impacts to the extent feasible. The proposed project would not exceed the levels of significance of utility and service system impacts previously addressed in the 2003 LRDP EIR, nor would it introduce any new significant impacts that were not previously addressed.
### 7.17 Mandatory Findings of Significance

<table>
<thead>
<tr>
<th>Would the project…</th>
<th>Potentially Significant Impact</th>
<th>Less than Significant with Mitigation</th>
<th>Impact for which 2003 LRDP EIR is Sufficient</th>
<th>Less than Significant Impact</th>
<th>No Impact</th>
</tr>
</thead>
<tbody>
<tr>
<td>a) Does the project have the potential to degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, reduce the number or restrict the range of a rare or endangered plant or animal or eliminate important examples of the major periods of California history or prehistory?</td>
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<tr>
<td>b) Does the project have impacts that are individually limited, but cumulatively considerable? (&quot;Cumulatively considerable&quot; means that the incremental effects of a project are considerable when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probable future projects)?</td>
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<tr>
<td>c) Does the project have environmental effects that will cause substantial adverse effects on human beings, either directly or indirectly?</td>
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<td>☐</td>
</tr>
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</table>

a) The proposed project would not significantly affect fish or wildlife habitat, nor would it eliminate examples of California history or prehistory. Cumulative regional impacts could be significant, but mitigation measures to reduce these potentially significant impacts to less-than-significant levels are not available or are not within the jurisdiction of the University of California to enforce and monitor. These impacts were adequately analyzed in the 2003 LRDP EIR and fully addressed in the Findings and Statement of Overriding Considerations adopted by The Regents in connection with its approval of the 2003 LRDP. No conditions have changed and no new information has become available since certification of the 2003 LRDP EIR that would alter this previous analysis.

b,c) The proposed project would not contribute to significant unavoidable impacts identified in the 2003 LRDP EIR related to: agriculture resources, population and housing, public services, recreation, and utilities and service systems. It would incrementally contribute to, but would not exceed, significant and unavoidable impacts related to: aesthetics, air quality, biological resources, cultural resources, hydrology and water quality, noise, and transportation/circulation. These impacts were adequately analyzed in the 2003 LRDP EIR and fully addressed in the Findings and Statement of Overriding Considerations adopted by The Regents in connection with its approval of the 2003 LRDP. No conditions have changed and no new information has become available since certification of the 2003 LRDP EIR that would alter this previous analysis.
8 FISH & GAME DETERMINATION

Based on the information presented in this Tiered Initial Study, the project has a potential to adversely affect wildlife or the habitat upon which wildlife depend. Therefore, a filing fee will be paid.

_____ Certificate of Fee Exemption

__X__ Pay Fee
REFERENCES

Barry, Sean. UC Davis Environmental Health and Safety Department. 2007. Personal communication with Matt Dulcich, UC Davis Office of Resource Management and Planning.


Chandler, Mike, UC Davis Fire Chief. 2003, February 27. Personal communication with Sarah Mattern; regarding achievement of stated standard of response.


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UC Davis ORMP. 2003c. Campus Water Balance.

UC Davis ORMP. 2003d. Fall 2002 UC Davis Travel Behavior Survey.


10 AGENCIES & PERSONS CONSULTED

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