

UC DAVIS

BUILDING J-1 RENOVATION AND UPGRADE

Draft Tiered Initial Study and
Proposed Negative Declaration

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:

Building J-1 Renovation and Upgrade

Project location:

University of California, Davis
Solano 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
- 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 project's consistency with existing, applicable land use controls, and name of persons who prepared the study.

2.2 TIERING PROCESS

This environmental analysis is a Tiered Initial Study for the proposed Building J-1 Renovation and Upgrade (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 form 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 would not result in any potentially significant impacts that cannot be mitigated to less-than-significant levels or are not sufficiently addressed by the 2003 LRDP EIR. The analysis contained in this Tiered Initial Study concludes that the proposed project would result in the following categories of impacts, depending on the environmental issue involved: no impact; less-than-significant impact; less-than-significant impact with the implementation of 2003 LRDP EIR or project-specific mitigation measures; or contribution to a significant and unavoidable impact that was adequately analyzed in the 2003 LRDP EIR for which no new mitigation measures are available and no new analysis is proposed. The project would not result in new potentially significant impacts that were not previously identified in the 2003 LRDP EIR. Therefore, preparation of a Negative Declaration is appropriate (the Proposed Negative Declaration is presented in Appendix A).

This Initial Study concludes that the 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. The appropriate reference to the LRDP Mitigation Monitoring Program will also be made. 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 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.

Since none of the conditions described in CEQA or the CEQA Guidelines calling for preparation of a subsequent or supplemental EIR have occurred, 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.

2.3 PUBLIC AND AGENCY REVIEW

This Draft Tiered Initial Study will be circulated for public and agency review from June 7, 2006 to July 7, 2006. 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
- 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 July 7, 2006 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

2.4 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. Approval of the proposed project has been delegated to the campus by The Board of Regents of the University of California (The Regents) and is expected to be considered by the campus' Facilities and Enterprise Policy Committee in July 2006.

2.5 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 Resources Potentially Affected: identifies which environmental resources, 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 and 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.

Appendix A – Proposed Negative Declaration: presents the Proposed Negative Declaration for the project.

3 PROJECT DESCRIPTION

3.1 REGIONAL LOCATION

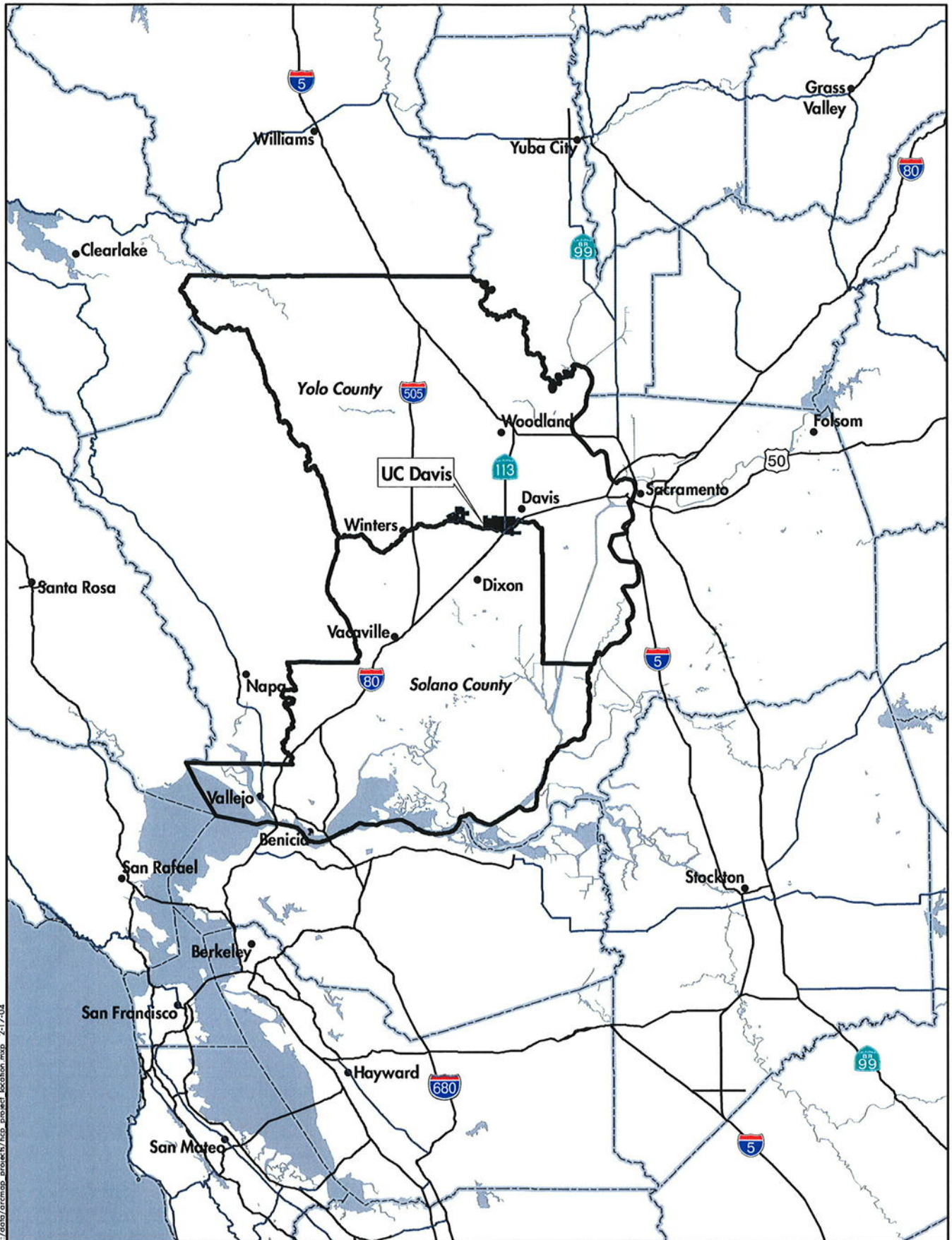
The approximately 5,300 acre UC Davis campus is located in Yolo and Solano Counties approximately 72 miles northeast of San Francisco, 15 miles west of the City of Sacramento, and adjacent to the City of Davis (see Figure 3.1). The campus is comprised of four campus units: the central campus, the south 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

The proposed UC Davis Building J-1 Renovation and Upgrade would renovate and expand an existing building to provide increased laboratory and office space. The existing Building J-1 consists of approximately 23,000 square feet that was designed, constructed, and operated for infectious agent containment research. However, the north wing is currently being used as storage space due to deficiencies in meeting current standards for infectious agent containment. The proposed project would renovate approximately 1,550 square feet within the north wing of Building J-1 to provide improved animal holding, laboratory containment rooms, and upgraded air handling capabilities. The project would expand the building approximately 400 square feet by constructing an exterior corridor along the north and east sides of the north wing of Building J-1. The new exterior corridors would facilitate the renovation project for research with infectious agents requiring Biosafety Level 3 (BSL 3)¹ containment. In total, the proposed project would provide a total of 1,130 square feet of BSL 3 space. Building J-1 is located on the South Campus at UC Davis at the Center for Laboratory Animal Science and is approximately 150 feet east of Old Davis Road and approximately 300 feet south of Interstate 80 as shown on Figures 2 and 3.

Research studies at the renovated building would involve cultured experimentation using pathogenic agents as well as the holding of infected birds, mammals (potentially rodents and cats), and insects (such as mosquitoes). The long range plans for laboratory operations are to transition various ongoing research projects on bird and mosquito hosts for western equine encephalomyelitis (requiring BSL 2 laboratory design and operation measures) and St Louis and West Nile viruses (requiring BSL 3 laboratory design and operation measures) from marginally adequate facilities outside of the Davis area to the renovated containment area within Building J-1. Pathogen transmission studies with mosquitoes will require adult mosquito holding facilities as well as limited rearing insectaries. In addition, studies with additional pathogenic agents could occur within the renovated Building J-1. BSL 3 space will be needed to safely prepare infectious agents for infection and to house infected birds

¹ Biosafety ratings range from Level 1 to Level 4 and indicate the varying degrees of building containment and laboratory precautions that must be followed while conducting research with particular organisms. See Section 3.5.1 of this Initial Study for additional biosafety information.



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Figure 1
UC Davis Location

and insects (such as mosquitoes). BSL 2 bench space with biosafety hoods will be needed to conduct diagnostics using both molecular and conventional approaches. To avoid transporting infectious agents, the consolidated operations within the Building J-1 would allow researchers to bring infectious agents and hosts together and then conduct diagnostics within the same facility.

3.3 PROJECT SITE

The project site is a developed portion of the UC Davis South Campus. The building site is south of Interstate 80 and east of Old Davis Road as shown on Figures 2 and 3. The proposed building expansion is shown as the exterior corridor on Figure 4. Building J-1 was originally designed, constructed, and operated for infectious agent research. In recent years, the building has been used primarily for storage purposes due to deficiencies meeting current standards for infectious agent containment. The proposed expansion of Building J-1 to provide exterior corridor space would take place on the northeast side of the building. No other improvements outside the building are anticipated other than as necessary to provide a handicapped parking stall, accessibility signage and walkway modifications. Land uses surrounding the site include Old Davis Road and Interstate 80 to the west and north and research buildings to the east and south. Continued use of the project site for research purposes is consistent with the *Academic and Administrative* land use designation contained in the 2003 LRDP.

3.4 PROJECT NEED AND OBJECTIVES

The proposed project would provide critically needed facilities necessary to support research funded by the National Institute of Allergy and Infectious Diseases/National Institute of Health (NIAID/NIH) as well as the U.S. Center for Disease Control and Prevention (CDC). Research studies would involve in-vitro experimentation as well as the holding of infected birds, mammals (potentially rodents and cats), and insects (such as mosquitoes). UC Davis currently does not have adequate space to efficiently conduct the proposed research and to meet the stringent containment and security requirements for BSL 3 research space. The proposed project would upgrade to current standards a building that was previously designed for high level research containment but is not adequate to meet current biosafety standards set by NIH/CDC in the current edition of the publication *Biosafety in Microbiological and Biomedical Laboratories (BMBL) (NIH 199)*.

Long range plans are to transition on-going research projects on avian and mosquito host competence for western equine encephalomyelitis and St. Louis and West Nile viruses requiring BSL 2 and BSL 3 containment respectively, from marginally adequate facilities in Bakersfield to improved containment within the J-1 building. Transmission studies with mosquitoes may require adult mosquito holding facilities in Building J-1 as well as limited rearing insectaries for infection studies. In addition, studies with additional viruses have been proposed and could occur within the Building J-1. BSL 3 space will be needed to prepare infectious agents for infection, to house infected birds, and arthropods (such as mosquitoes), and then bench space with Biosafety Hoods will be needed to conduct diagnostics using both molecular and conventional approaches. To avoid transporting infectious agents, operations within the revised Building J-1 would bring infectious agents and hosts together and then conduct diagnostics within the J-1 facility. In addition, the development of some office space would be required for assigned staff and students. The objectives of the project are to provide the needed BSL 3 research space, to provide laboratory support space for the BSL 3 space, and to meet BSL 3 space design standards.

3.5 PROJECT ELEMENTS

3.5.1 Facility Design

To meet the anticipated research requirements the proposed project would be constructed and furnished to conform with the requirements for BSL 2 and BSL 3 as defined in the BMBL. This publication defines four biosafety levels that apply to biohazardous materials operations, depending on the risk posed by the organism used. Although these biosafety levels were originally intended to protect human health, the CDC Guidelines are widely used to prevent release of animal pathogens from laboratories. BSL 2 is appropriate for use with biohazardous materials that are considered to be of ordinary (not special) potential hazard and may produce varying degrees of disease through accidental autoinoculation, ingestion, and skin or mucous membrane exposure. 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.

BSL 2 Laboratory

The following requirements apply to BSL 2 facilities:

- Lockable doors must be provided for facilities that house restricted agents.
- Planning for new laboratories should consider locating them away from public areas.
- Each laboratory must contain a sink for handwashing.
- Each laboratory must be designed so that it can be easily cleaned and chairs and other furniture used in laboratory should be covered with a non-fabric material that can be easily decontaminated.
- Laboratory furniture must be capable of supporting anticipated loading and uses. Spaces between benches, cabinets, and equipment must be accessible for cleaning.
- Biological safety cabinets should be installed in such a manner that fluctuations of the room supply and exhaust air do not cause the biological safety cabinets to operate outside their parameters for containment. Biological safety cabinets should be located away from doors, from windows that can be opened, from heavily traveled laboratory areas, and from other potentially disruptive equipment so as to maintain the air flow parameters for containment.
- An eyewash station must be readily available.
- Illumination must be adequate for all activities, avoiding reflections and glare that could impede vision.
- There are no specific ventilation requirements. However, planning of new facilities should consider mechanical ventilation systems that provide an inward flow of air without recirculation to spaces outside of the laboratory. If the laboratory has windows that open to the exterior, they are fitted with fly screens.

BSL-3 Laboratory

The following requirements 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 is 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 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 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 are 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 is 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 Biosafety Level 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 by a solid wall and by an outer corridor on the east side 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. 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 it 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.

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.

3.5.2 Building

The proposed project would renovate 1,550 square feet of existing space and construct approximately 400 square feet of new space. The existing space to be renovated is the north wing of Building J-1. The 1,550 square feet would be renovated to upgrade six laboratory rooms and a central corridor for access to the renovated laboratories. The 400 square feet of new space would provide a new corridor approximately 6 feet wide along the east side of the north wing of the building. The new corridor would provide a new exterior containment wall and a new corridor between the exterior wall and the six research laboratories. Once constructed, the exterior wall would facilitate the circulation of materials and personnel within the building so that containment and contamination issues could be addressed through a variety of laboratory practices in response to the changing needs and protocols of different research experiments involving infectious agents. By providing a secure and separate entry and exit corridor to certain laboratories, staff and research materials for certain experiments can be routed into and out of the laboratories in a manner that secures the facility from outside contamination and ensures containment of the research pathogens. The operational flexibility provided by an exterior corridor is not needed for all of the types of proposed research but is considered essential for a portion of the building. In addition to the proposed floorplan changes, the project would upgrade the building systems to ensure appropriate air handling and plumbing to achieve containment and upgrade of the electrical, telecommunications, and building finishes to meet current laboratory requirements.

Details of some of the planned architectural systems are provided below:

Flooring: Existing and new concrete slabs will be covered with continuous epoxy flooring with integral cove bases, including approximately 42 inch high wainscots in the procedure rooms.

Ceilings: The new ceilings will be gypsum board sealed with epoxy paint.

Walls: The walls in the procedure rooms and anterooms will be gypsum board sealed with epoxy paint. The existing concrete walls will be sealed with epoxy paint. The new concrete block walls in the central corridor will be filled and sealed with epoxy paint.

Doors: The existing gasketed doors to the anterooms and five of the procedure rooms will be cleaned and checked for air tightness. The new door to the autoclave room and the new interior and exterior corridor doors will be painted galvanized steel doors with painted galvanized steel frames to permit occasional but not routine hot water cleaning.

Drains: Existing floor drains will not be structurally modified. Existing floor drains will be sealed by the users with temporary plugs and silicone sealant. The plugs and sealant will be removed and replaced by the users in the event that the drain is needed for cleaning.

Sinks: Existing and new sinks will be provided with new foot-pedal or a similar type of hand-free control.

Waste treatment: Effluent from sinks and floor drains will not require special treatment.

Emergency shower: An emergency shower and eyewash units will be located for use by researchers.

Shower-out room: One single occupancy, uni-sex, handicapped accessible shower will be positioned to connect to the new exterior corridor to allow a shower-out capability.

Emergency power: An emergency generator will be provided to provide sufficient fan power to maintain pressurization differentials, temperatures in the animal holding and insectary rooms, laminar flow hood operation, freezers, emergency lighting and the fire alarm system.

Autoclave: A new, medium size pass through autoclave is included in the project.

Carbon dioxide: Carbon dioxide tanks will be stored at the exterior of the building and piping will be provided to each of the five procedure rooms.

Biosafety Cabinets: The project will include appropriate Class II, Type 2A non-ducted Biosafety Cabinets.

Air Handling System:

- System will use 100% outside air.
- High Efficiency Particulate Air (HEPA) air filtration.
- Constantly maintained negative pressure from the entry door from J1 to the central “clean” corridor to the prep rooms to the procedure rooms; increasing pressure from the procedure rooms to the exterior “dirty” corridor to the exterior ambient pressure; rapid response pressure adjustments required to maintain containment under all conditions.
- Independent supply air, exhaust air and temperature control for each room
- Temperature and system functionality will be continuously monitored.
- The air handling system will be provided with emergency power and the system controls will have an uninterruptible emergency power supply.
- Two new 15 ton chillers will be installed, providing complete redundancy in the animal and insect holding spaces.
- One new 6,000 cubic feet per minute (cfm) air handler unit with two separate fans will provide approximately 70% of normal pressurization in the event of failure or servicing of the one of the fans or filters.
- Two 3,300 cfm exhaust fans will provide approximately 70% of pressurization in the event of failure or servicing of one of the fans or filters.
- Supply air smoke damper controlled by building fire alarm.
- Locally-controlled air tight dampers will be provided for the supply and exhaust ducts to each procedure rooms to allow for sealing the rooms during decontamination.

3.5.3 Landscaping

No changes to the area landscaping are proposed. No trees will be removed to construct the proposed addition.

3.5.4 Parking and Roadways

No parking lots or roadways will be modified.

3.5.5 Utilities and Infrastructure

As discussed briefly below and analyzed in Section 4.15, the proposed project would require continued use of existing connections to campus utilities and infrastructure including domestic water, sanitary sewer, storm drainage, electricity, natural gas, and telecommunications. Other than electricity, no changes to the designed service levels are expected to result from the proposed project.

The project would result in an increase in electricity usage but this increase is expected to be accommodated by the existing electrical transformer that serves Building J-1. As discussed below in Section 3.5.5, the electricity consumption from the proposed project will be evaluated during design of the building and where possible, increased efficiency measures will be incorporated to minimize the increased consumption.

3.5.6 Sustainable Design Elements

The proposed project would comply with the UC Policy on Green Building Design and Clean Energy Standards, and would meet the campus baseline² as applicable to the project. Given the extraordinarily high rate of energy use of the proposed facility, an HVAC energy recovery system, or alternative energy efficiency features, will be incorporated into the project if justified by life cycle cost analysis. A LEED goal point checklist will be developed at the start of schematic design to identify opportunities to incorporate sustainable design and EPA Labs 21 principles into the design and execution of the project.

The primary sustainability issue of this project is energy consumption. The BSL 3 program requirement for 100% outside air, high air exchange rates and very high static pressure due to rigorous HEPA filtration will result in an extremely high energy use per square foot. A comprehensive energy model of the facility's energy use will be prepared for evaluation of alternative systems. Sustainable design goals include high efficiency fans, motors, filtration and ducting. Energy recovery systems, and other alternative energy efficiency measures as appropriate, will be evaluated for life cycle costs and incorporated into the project if shown to be effective.

In addition, there should be close coordination between the design engineers, users and EH&S to identify protocols and control systems that may allow HVAC load reduction if there are periods when it is not required to support the research program.

3.5.7 Population

The proposed project is expected to add less than 10 new employees to the campus population.

3.5.8 Security

Doors to the renovated space will be equipped with a card reader system to record all staff who enter and exit the building. Similarly, public access to the BSL-2 laboratory would not be allowed. Electronic security access connected to the central campus alarm system would be installed.

3.6 CONSTRUCTION SCHEDULE AND STAGING

Construction of the proposed project is anticipated to begin in Fall 2006 and end in Fall of 2007. Construction staging and contractor parking associated with the proposed project would occur on at the project site and adjacent to the existing Building J-1.

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.

4.1 2003 LRDP SCOPE OF DEVELOPMENT

The proposed project would provide additional research space to serve campus growth. 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 400 gross square feet 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 research use is an expansion of the existing research facility at the Center for Laboratory Animal Science. The 2003 LRDP designated this area an *Academic/Administrative Low Density* land use and the proposed use would be consistent with the designation. No land use change to the UC Davis 2003 LRDP would be required.

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 employees³. 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

³ The on-campus population includes students and employees on the UC Davis main campus and at other University owned and operated facilities in the City of Davis. The campus population is determined based on headcount, a method of counting faculty, staff, and students in which each person is counted as one unit regardless of whether he or she is employed or studying full-time or part-time. Student population figures represent student headcount averaged over the primary three academic quarters (i.e., fall, winter, spring).

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 less than 10 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 support these main 2003 LRDP objectives by providing increased BSL 3 research space. BSL 3 research space is a highly specific type of research space that is needed to conduct research using pathogenic organisms. This type of research is critical to the mission of the University and is required to investigate basic science questions and to conduct applied research into the lifecycle of pathogenic organisms.

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); degradation of visual character or quality (Section 7.1); increases in light and glare (Section 7.1); conversion of prime farmland (Section 7.2); loss of habitat for Swainson's hawks and burrowing owls (Section 7.4); loss of wetland and riparian habitat (Section 7.4); loss of valley elderberry beetle

habitat (Section 7.4); loss of archaeological and historical resources (Section 7.5); degraded receiving water quality (Section 7.8); and increased water extraction from the shallow/intermediate aquifers (Section 7.8).

- The proposed project would incrementally contribute to, but would not exceed, significant and unavoidable cumulative impacts identified in the 2003 LRDP EIR related to: increases in criteria pollutant emissions (Section 7.3); increased water extraction from the deep aquifers (Section 7.8); increased ambient noise levels (Section 7.11); 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); construction of wastewater treatment facilities (Section 7.16).
- The proposed project would incrementally contribute to, but would not exceed, less-than-significant cumulative impacts identified in the 2003 LRDP EIR related to: increased toxic air contaminants (Section 7.3); use and transport of hazardous materials and generation of hazardous wastes (Section 7.7); and discharge of treated effluent to Putah Creek (Section 7.8).

5 ENVIRONMENTAL FACTORS POTENTIALLY AFFECTED

The environmental factors, if checked below, would be potentially affected by this project and would involve at least one impact that is a 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 as indicated by the checklist on the following pages.

- | | | |
|--|---|--|
| <input type="checkbox"/> Aesthetics | <input type="checkbox"/> Agricultural Resources | <input type="checkbox"/> Air Quality |
| <input type="checkbox"/> Biological Resources | <input type="checkbox"/> Cultural Resources | <input type="checkbox"/> Geology, Soils & Seismicity |
| <input type="checkbox"/> Hazards & Hazardous Materials | <input type="checkbox"/> Hydrology & Water Quality | <input type="checkbox"/> Land Use & Planning |
| <input type="checkbox"/> Mineral Resources | <input type="checkbox"/> Noise | <input type="checkbox"/> Population & Housing |
| <input type="checkbox"/> Public Services | <input type="checkbox"/> Recreation | <input type="checkbox"/> Transportation, Circulation & Parking |
| <input type="checkbox"/> Utilities/Service Systems | <input type="checkbox"/> Mandatory Findings of Significance | |

As indicated in the checklist above and based on the analysis presented in this Tiered Initial Study, it has been determined that for all resource areas, the proposed project would not result in any significant impacts that cannot be mitigated to a less-than-significant level or are not sufficiently addressed by the 2003 LRDP EIR. This Tiered Initial Study has concluded that the project would incrementally contribute to, but would not exceed, certain significant impacts previously identified in the 2003 LRDP EIR, and that for such impacts, no new mitigation measures, other than those previously identified in the 2003 LRDP EIR, are required.

6 DETERMINATION

On the basis of this initial evaluation:

- I find that 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. The proposed Negative Declaration is included in Appendix A of this Tiered Initial Study.
- I find that the proposed project COULD have a significant effect on the environment that has not been previously addressed in the 2003 LRDP EIR, and [a] new project-specific mitigation measure[s], in addition to those previously identified in the 2003 LRDP EIR, [is/are] required to reduce this effect to such a point that clearly no significant impact would occur. A MITIGATED NEGATIVE DECLARATION will be prepared.
- I find that 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.

John A. Meyer
Vice Chancellor – Resource Management and Planning

Date

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 it was not previously addressed in the 2003 LRDP EIR and may be significant based on substantial evidence and the significant 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, but the LRDP EIR contained an adequate project-level analysis for the impact.
- Less than Significant Impact: An effect for which no significant impacts, 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 is south of Interstate 80 and east of Old Davis Road in a developed portion of the campus that mostly contains small single story buildings that were constructed in the 1960’s. The project site is mostly screened from public view by the presence of mature vegetation along Old Davis Road. Completion of the proposed project is not expected to be visible from public view points.

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. No significant impacts identified in the 2003 LRDP EIR related to aesthetics are relevant to the proposed project.

7.1.4 Environmental Checklist and Discussion

AESTHETICS		Potentially Significant Impact	Less than Significant with Mitigation	Impact for which 2003 LRDP EIR is Sufficient	Less than Significant Impact	No Impact
Would the project...						
a)	Have a substantial adverse effect on a scenic vista?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b)	Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
c)	Substantially degrade the existing visual character or quality of the site and its surroundings?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
d)	Create a new source of substantial light or glare which would adversely affect day or nighttime views in the area?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

a) A scenic vista is defined as an expansive view of a highly valued landscape from a publicly accessible viewpoint. 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 proposed project would have no effect on 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 proposed project would have no effect on the visual character of the campus. No impact would occur.

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 replace existing exterior lighting at the building site but would not add any new lighting. The site lighting would not change. No impact would occur.

Summary

No 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 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

The project site contains no agricultural resources and is designated by the FMMP as Urban and Built-Up land.

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. No significant impacts identified in the 2003 LRDP EIR related to agricultural resources are relevant to the proposed project.

7.2.4 Environmental Checklist and Discussion

AGRICULTURAL RESOURCES	Potentially Significant Impact	Less than Significant with Mitigation	Impact for which 2003 LRDP EIR is Sufficient	Less than Significant Impact	No Impact
<hr/>					
Would the project...					
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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b) Conflict with existing zoning for agricultural use, or a Williamson Act contract?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

-
- a) The project site is designated on the FMMP as Urban and Built-Up land. The project would have no effect on agricultural resources. 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 would have no effect on Williamson Act agreements. No impact would occur.
 - c) The proposed project is not adjacent to farmland and would have no effects on farmland or conversion of farmland. No impact would occur.

Summary

No 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, which are called criteria pollutants: ozone (O₃), carbon monoxide (CO), nitrogen dioxide (NO₂), sulfur dioxide (SO₂), particulate matter less than 10 microns in diameter (PM₁₀), and lead (Pb). In addition, particulate matter less than 2.5 microns in diameter (PM_{2.5}) is a criteria pollutant. Ozone is evaluated by assessing emissions of its precursors: reactive organic gases (ROG) and NO₂.

Toxic air contaminants (TACs) are airborne pollutants for which there are no air quality standards but 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. Air toxics 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 therefore, tend to have a greater influence on changes in measured ambient pollutant concentrations. Ambient concentrations of CO and PM₁₀ 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 and nonattainment is based on monitored data throughout the SVAB.

Project Site

There are no sensitive receptors on or near the project site. Existing air pollutant sources at or near the project site include the campus Wastewater Treatment Plant, research facilities on the South Campus, and vehicle traffic on Interstate 80.

7.3.2 2003 LRDP EIR Standards of Significance

The 2003 LRDP EIR considered 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_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 PM₁₀ 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 included 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.

2003 LRDP EIR IMPACTS		Level of Significance Prior to Mitigation	Level of Significance After Mitigation
AIR QUALITY			
4.3-1	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.	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

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 implementing the 2003 LRDP, they are not readopted in this Initial study or Negative Declaration. 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 2003 LRDP EIR mitigation measures.

2003 LRDP EIR MITIGATION MEASURES

AIR QUALITY

- 4.3-1(a) Vehicular Sources. The following measures will be implemented to reduce emissions from vehicles, as feasible.
- The campus shall continue to actively pursue Transportation Demand Management to reduce reliance on private automobiles for travel to and from the campus.
 - Provide pedestrian-enhancing infrastructure to encourage pedestrian activity and discourage vehicle use.
 - Provide bicycle facilities to encourage bicycle use instead of driving.
 - Provide transit-enhancing infrastructure to promote the use of public transportation.
 - Provide facilities to accommodate alternative-fuel vehicles such as electric cars and CNG vehicles.
 - Improve traffic flows and congestion by timing of traffic signals to facilitate uninterrupted travel.
 - 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.
- 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.
- 4.3-6 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.
-

The mitigation measures listed above are being utilized by the proposed project. The proposed project is evaluated in the checklist and discussion below.

7.3.4 Environmental Checklist and Discussion

AIR QUALITY	Potentially Significant Impact	Less than Significant with Mitigation	Impact for which 2003 LRDP EIR is Sufficient	Less than Significant Impact	No Impact
Would the project...					
a) Conflict with or obstruct implementation of the applicable air quality plan?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b) Violate any air quality standard or contribute substantially to an existing or projected air quality violation?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

c) 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)?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
d) Expose sensitive receptors to substantial pollutant concentrations?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
e) Create objectionable odors affecting a substantial number of people?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

a,b,c,d) **Construction**

The 2003 LRDP EIR finds that construction activities under the 2003 LRDP could exceed YSAQMD thresholds (LRDP Impact 4.3-3). Construction under the proposed project would be primarily confined to renovation of the interior and a small 400 square-foot addition to the north wing of the Building J-1 Laboratory. Therefore, limited ground disturbing activities would be involved. Because of the small size of the project and limited construction activities, the project would not result in substantial air emissions that could cause a significant impact.

Operation

Criteria Pollutants Impacts

Under normal conditions, the operation of the proposed laboratory would not result in any direct emissions of pollutants, as all equipment would be operated on electricity, and space heating and cooling would be provided by an HVAC system that would operate on electricity.

In the event of an electrical outage, a 80 kilowatt (kW) emergency stand-by diesel generator would be used to provide power to life-safety, ventilation, environmental, and non-essential emergency services such as a fire alarm and other special signal systems at Building J-1. Because the nature and duration of an outage cannot be predicted, emissions from the operation of the diesel generator cannot be estimated meaningfully. The only emissions that would occur routinely would be associated with the periodic testing of the emergency stand-by generator. Table 1 shows daily emissions of criteria pollutants from the emergency stand-by generator, based on testing the generator for one hour every month (12 hours per year) at 100 percent load, consistent with the campus's emergency stand-by generator testing schedule of the campus.

Additionally, indirect emissions would result from additional vehicles traveling to and from the site. The proposed project would result in the hiring of 10 additional staff. As discussed in Section 4.3, above, this increase in campus population is well within the 2003 LRDP's on-campus population projections. Therefore, it is likely that the additional vehicle trips associated with the proposed project would contribute incrementally to, but not exceed, the vehicular emissions estimated in the 2003 LRDP EIR. To ensure that emissions that would result from the project would be minimal, an estimate of vehicle emissions was developed using the URBEMIS 2002 Model, which is a California Air Resources Board-approved model for estimating emissions from land use development projects. Table 1 lists the estimated daily emissions of criteria pollutants from employee trips.

Table 1
Projected Daily Emissions from Vehicles and from Testing of Emergency Stand-by Generator¹

Source	NO _x	ROGs	CO	PM ₁₀
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Emergency Stand-by Generator	13.3	0.29	1.6	0.25
Vehicles	0.33	0.27	3.25	0.28
Total Project Emissions	13.63	0.56	4.85	0.53
Significance Threshold	82	82	550	150

1. Assuming 1 hour per month at 100% load

As Table 1 shows, the maximum daily emissions of criteria pollutants from the proposed project would not exceed the significance thresholds and therefore the project would not result in a significant impact on air quality. Air quality permits that may be needed as part of the proposed project will be reviewed and coordinated with the YSAQMD in order to ensure proper submittal and completion of permit requirements.

The 2003 LRDP EIR finds 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 is currently being updated and contains strategies for lowering the region’s emissions to meet the O₃ standard by 2013. However, campus growth under the 2003 LRDP through 2015-16 is not expected to be 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 YSAQMD during the update of the Clean Air Plan and other applicable air quality planning efforts. However, given the likelihood of exceedance 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. This impact was adequately analyzed in the 2003 LRDP EIR and was fully addressed in the Findings and Overriding Considerations adopted by The Regents in connection with its 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.

Toxic Air Contaminants

A campus-wide health risk assessment (HRA) was prepared in conjunction with the preparation of the 2003 LRDP EIR. The HRA modeled health risk from all existing sources of toxic air contaminant (TAC) emissions on the campus and also included a number of future sources of TACs. For the South Campus area, the HRA included a number of existing laboratories and approximately 60,000 square feet of new laboratory space, with laboratory chemical emissions associated with “Laboratory Type II” – Biological Sciences (URS 2003). These laboratory chemical emissions are based on factors that are expressed as grams per second (g/s) emissions per square foot (ft²) of laboratory floor space. Further details can be found in the 2003 LRDP HRA (URS 2003). The proposed laboratory space in the renovated Building J-1 is approximately 1,550 square-feet. Because the campus-wide HRA includes emissions from about 60,000 square feet of new laboratory space on the south campus, and 1,550 square feet of laboratory space is only a small portion of that space, the TAC emissions associated with the proposed project are already included in the campus-wide HRA and new analysis is not required.

Cumulative Development

The 2003 LRDP EIR finds 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, and campus growth under the 2003 LRDP will be incorporated in the plan update. LRDP Mitigation 4.3-6, which is being utilized by the proposed project, requires implementation of LRDP Mitigation 4.3-1 (a and 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 Overriding Considerations adopted by The Regents in connection with its 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. In 2005, the State adopted a new 8-hour ozone standard; however, that standard has not gone into effect at this time, therefore the conclusions of the 2003 LRDP remain unchanged.

- 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 create any additional sources of odor and there would be no impact.

Summary

LRDP Mitigations 4.3-1(a) and (c), 4.3-6, and 4.3-8 are being utilized by the proposed project to 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 agricultural lands that include remnant riparian areas and urban 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; (6) and 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: the northern California black walnut, burrowing owl, Swainson's hawk, valley elderberry longhorn beetle, California tiger salamander, chinook salmon, giant garter snake, steelhead, and the northwestern pond turtle.

Project Site

The project site is mostly inside an existing building. Approximately 400 square feet of new construction would take place underneath the eave of the existing building. Additional outside construction would include installation of the emergency generator within the developed site area of Building J-1. There are no biological resources at the site and, accordingly, a biological site survey was not conducted. There are no trees on the project site.

Habitat

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

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.

Since 1991, nesting Swainson's Hawks have been recorded at five sites within ½ mile of the project site. Three nest sites are well over ¼ mile from the project site, on the north side of I80, and are screened by the freeway and existing trees. One nest site is located approximately 1.4 mile to the west of the project site and is screen by existing trees. The fifth site is approximately 100 feet northwest of the project site and is located in an area of high human activity; this nest tree is at the edge of Old Davis Road and the I80 freeway onramp, and is approximately 250 feet south of I80 at approximately the same elevation at the roadway.

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, coastal, etc.) 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 local applicable policies protecting biological resources.

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.

2003 LRDP EIR Impacts BIOLOGICAL RESOURCES		Level of Significance Prior to Mitigation	Level of Significance After Mitigation
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.	PS	LS

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 or Negative Declaration. 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 BIOLOGICAL RESOURCES

- 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 1/2-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

2003 LRDP EIR Mitigation Measures
BIOLOGICAL RESOURCES

are not readily identifiable, the campus will 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 equipment or creating temporary sound barriers).

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.

7.4.4 Environmental Checklist and Discussion

BIOLOGICAL RESOURCES

Would the project...	Potentially Significant Impact	Less than Significant with Mitigation	Impact for which 2003 LRDP EIR is Sufficient	Less than Significant Impact	No Impact
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?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
e) Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

a) **Plants**

No plants would be disturbed by the proposed project. No impact would occur.

Wildlife

Since 1991, nesting Swainson’s Hawks have been recorded at five sites within ½ mile of the project site. Three nest sites are well over ¼ mile from the project site, on the north side of Interstate 80, and are screened by the freeway and existing trees. One nest site is located approximately 1.4 mile to the west of the project site and is screened by existing trees. The fifth site is approximately 100 feet north of the project site and is located in an area of high human activity; this nest tree is at the edge of Old Davis Road and the Interstate 80 freeway onramp, and is approximately 250 feet south of Interstate 80 at approximately the same elevation at the roadway.

The only nest that potentially could be disturbed by the proposed project is the nest located approximately 100 feet to the northwest. However, this nest site has not been used in several years and is used by birds that are habituated to the high levels of human activity on Old Davis Road, the I80 onramp, and I80, and to routine activities at Building J-1 and other adjacent facilities within the Center for Laboratory Animal Science. The proposed project is largely an interior remodel with the only exterior modification to the building being the construction of two exterior walls on the east side of the building where the existing J-1 building will shield the nest tree from these construction activities. General construction activity on the site will not be substantially different from existing activity adjacent to the nest site on Old Davis Road, the I80 onramp, and I80; and none of the construction techniques include exceptionally loud sudden noises such as pile driving. Construction will start in the winter prior to the arrival of Swainson’s Hawks from the wintering grounds. Therefore, construction activities will be ongoing when the birds select the nest sites in Spring 2007. For these reasons, the potential impacts to nesting Swainson’s Hawks are considered less than significant. However, LRDP mitigation measure 4.4-4(a-b) will be implemented to ensure that no significant impacts occur.

b,c) The proposed project would have no effect on riparian and wetland areas. No impact would occur.

- d) The Putah Creek corridor 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 proposed project is approximately ½ mile from the Putah Creek Corridor. Therefore, 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) No trees would be removed during project construction. No impact would occur.
- 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 VELB at Russell Ranch. The proposed project would not be located at the Russell Ranch. Therefore, the proposed project would not conflict with an adopted HCP or NCCP. No impact would occur.

Summary

Mitigation measures 4.4-4 (a,b) from the 2003 LRDP EIR is 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

Building J-1 was constructed in 1966 is not considered an historical resource. The proposed project would involve very limited underground disturbance for installation of the emergency generator and would take place in areas disturbed previously for the original construction of Building J-1. Because the project would not disturb intact cultural resources, a cultural resources survey was not conducted.

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 Guideline § 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 Guideline § 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 Guideline § 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 Guideline Section 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. No significant impacts identified in the 2003 LRDP EIR related to cultural resources are relevant to the proposed project.

7.5.4 Environmental Checklist and Discussion

CULTURAL RESOURCES	Potentially Significant Impact	Less than Significant with Mitigation	Impact for which 2003 LRDP EIR is Sufficient	Less than Significant Impact	No Impact
Would the project...					
a) Cause a substantial adverse change in the significance of a historical resource as defined in Section 15064.5?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b) Cause a substantial adverse change in the significance of an archaeological resource pursuant to Section 15064.5?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
c) Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
d) Disturb any human remains, including those interred outside of formal cemeteries?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

- a) The project site contains no potentially historic resources. The existing Building J-1 was constructed in 1966 and contains no unique architectural or historical qualities. Alterations to the building would not affect a potentially historic resource. No impact would occur.
- b) Project construction would not include excavation of previously undisturbed materials and would be limited to very shallow excavation to install a concrete pad for the emergency generator and to bury electrical conduit between the generator and Building J-1. The proposed project would have no potential to affect cultural resource materials. No impact would occur.
- 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 proposed project would have no potential to disturb human remains. No impact would occur.

Summary

No 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 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 predominant soil constraint to construction on campus is soil shrink-swell potential (the potential for soil volume to change with a loss or gain in moisture).

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 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. No unusual site conditions are expected and the proposed improvements will utilize conventional foundation and substrate design to achieve an acceptable structural design.

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 this standard 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

GEOLOGY, SOILS, & SEISMICITY					
Would the project...	Potentially Significant Impact	Less than Significant with Mitigation	Impact for which 2003 LRDP EIR is Sufficient	Less than Significant Impact	No Impact
a) Expose people or structures to potential substantial adverse effects, including the risk of loss, injury, or death involving:					
i) Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault? Refer to Division of Mines and Geology Special Publication 42.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
ii) Strong seismic ground shaking?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
iii) Seismic-related ground failure, including liquefaction?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
iv) Landslides?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b) Result in substantial soil erosion or the loss of topsoil?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
c) Be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction or collapse?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

- e) 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. 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) 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. Geotechnical investigations address the potential for liquefaction, lateral spreading, and other types of ground failure. Expansion of the building will include an engineered foundation design to match the site specific conditions. Therefore, in compliance with campus procedure, 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.

- a,iv) The UC Davis campus and the surrounding area are characterized by flat topography and therefore would not be subject to landslides. Therefore, 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). In addition, the site is already developed and will include only a small amount of excavation. Therefore, this impact is considered to be less than significant. 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) See the discussion in item (a,iii) above.
- 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. During detailed design, the design team will utilize the design and geotechnical information from the existing building and if needed, will conduct further investigation to determine whether the foundation design needs specific modifications in response to site specific conditions. 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. 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 Committee, 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 project site is not on any of the contaminated sites on campus.

7.7.2 2003 LRDP EIR Standards of Significance

The 2003 LRDP EIR considered 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. None of the potentially significant hazards and hazardous materials impacts identified in the 2003 LRDP EIR are relevant to the proposed project. LRDP Impacts 4.7-1, 4.7-2, 4.7-5, 4.7-6, 4.7-7, 4.7-8, 4.7-9, and 4.7-13, presented below, are considered relevant to the proposed project. Each of these impacts 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.

2003 LRDP EIR IMPACTS HAZARDS & HAZARDOUS MATERIALS		Level of Significance Prior to Mitigation	Level of Significance After Mitigation
4.7-1	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.	LS	LS
4.7-2	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.	LS	LS
4.7-5	Implementation of the 2003 LRDP could increase routine use of biohazardous materials on campus by UC Davis laboratories, which would not create significant hazards to the public or the environment.	LS	LS
4.7-6	Implementation of the 2003 LRDP could increase routine generation of biohazardous wastes on campus by UC Davis laboratories, which would not create significant hazards to the public or the environment.	LS	LS

2003 LRDP EIR IMPACTS HAZARDS & HAZARDOUS MATERIALS		Level of Significance Prior to Mitigation	Level of Significance After Mitigation
4.7-7	Implementation of the 2003 LRDP could increase routine use of laboratory animals on campus by UC Davis laboratories, which would not significantly increase the risk of animal bites, escapes, and disease transmission.	LS	LS
4.7-8	Implementation of the 2003 LRDP would increase the routine transport of hazardous materials to and from campus, which would not significantly increase hazards to the public or the environment.	LS	LS
4.7-9	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.	LS	LS
4.7-13	Demolition or renovation of buildings under the 2003 LRDP would not expose construction workers or campus occupants to contaminated building materials.	LS	LS

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 implementing the 2003 LRDP, they are not readopted in this Initial Study or Negative Declaration. 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 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&S audits and safety training. These programs may be replaced by other programs that incorporate similar health and safety measures.
4.7-2(a)	Implement LRDP Mitigation 4.7-1.
4.7-2(b)	The campus shall continue to implement the same (or equivalent) hazardous waste management programs during the 2003 LRDP planning horizon, including, but not necessarily limited to, hazardous waste storage 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.
4.7-5(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).

2003 LRDP EIR MITIGATION MEASURES

HAZARDS & HAZARDOUS MATERIALS

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 investigations 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.
4.7-13	The campus shall survey buildings for potential contamination before any demolition or renovation work is performed.

The proposed project is evaluated in the checklist and discussion below.

7.7.4 Environmental Checklist and Discussion

HAZARDS & HAZARDOUS MATERIALS	Potentially Significant Impact	Less than Significant with Mitigation	Impact for which 2003 LRDP EIR is Sufficient	Less than Significant Impact	No Impact
Would the project...					
a) Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
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?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
c) Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
g) Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

- 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?

- a) As described in Section 3.5, hazardous materials stored or used in the proposed laboratory would include laboratory chemicals, experimentally infected rats, mice, avian hosts, arthropods and possibly cats, and infectious disease agents.

Biohazardous Materials

The 2003 LRDP EIR finds 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.

The use 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 facility.

As discussed below, proper laboratory practices would be followed to minimize the risk that infectious diseases may spread to laboratory workers due to bites or scratches. 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-2 and 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.

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 if BSL-2 or BSL-3 materials are involved, these 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 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 bacteria, 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. Furthermore, all joints in the walls, floors, and ceilings would be sealed, and doors would be checked for air tightness.

Laboratory equipment that could generate aerosols, such as shakers and centrifuges, would be sealed or contained during use. In the laboratory, aerosols are deposited in relatively short distances from point sources. Potential aerosol emissions, if not controlled by a biosafety cabinet, are controlled by splash guards and decontamination of surrounding work surfaces. Given the small quantities of infectious organisms used 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 design of the facility.

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. Once treated, the waste would be considered non-hazardous waste (unless it also contains hazardous chemicals) and would be sent to the campus landfill. Animal carcasses would also be treated in the autoclave and then collected by the campus contractor for off-site incineration prior to disposal. Therefore, the potential that pathogens could be accidentally released to the environment in laboratory waste would be low and the associated impact would be less than significant impact.

The project also incorporates elements to ensure that the pathogens held in the BSL 2 and expanded BSL 3 facilities are secure. Access to Building J-1 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.

To further reduce the less-than-significant impact associated with the handling of biohazardous materials, the campus shall implement LRDP Mitigation 4.7-5(a) and (b). Safety policies will continue to be implemented to further reduce the significance of these impacts through LRDP Mitigations 4.7-5 (a) and (b) and 4.7-6 (a) and (b).

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 2003 LRDP EIR finds that implementation of the 2003 LRDP would increase routine use of research animals on the campus, which would not create a significant hazard for the public or the environment (LRDP Impact 4.7-7). To further reduce this less-than significant impact, LRDP Mitigations 4.7-7(a) through (c) require regular employee animal handling training,

preparation of Animal Care and Use Protocols, and review of plans and inspections by AAALAC, the USDA, and the Campus Veterinarian.

Animal research at all University of California institutions is governed by an Institutional Animal Care and Use Committee (IACUC). At UC Davis, the Animal Use and Care Administrative Advisory Committee (AUCAAC) serves as the IACUC. This committee is charged with ensuring that UC Davis complies with all regulations established by the United States Department of Agriculture (USDA). UC Davis also participates in the voluntary accreditation program established by the Association for the Assessment and Accreditation of Laboratory Animal Care (AAALAC). Based upon UC Davis' record of compliance at other laboratories involving the use of research animals, the potential hazard from the use of research animals in the proposed laboratory would be low and the impact would be less than significant.

Hazardous Chemicals

The 2003 LRDP EIR finds that implementation of the 2003 LRDP would increase routine hazardous chemical use (LRDP Impact 4.7-1), routine hazardous materials transport to and from the campus (LRDP Impact 4.7-8), and routine generation of hazardous chemical wastes (LRDP Impact 4.7-2) 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 LRDP EIR. 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 including the proposed project.

Additionally, this laboratory facility is intended for use primarily as a biological research lab, and so hazardous chemicals are unlikely to constitute a significant fraction of the potentially hazardous materials stored or used at the site. With implementation of LRDP Mitigations 4.7-1, 4.7-2(a-b), and 4.7-8 the project-level impacts associated with hazardous chemical use and chemical waste generation would be less than significant. Safety policies will 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 hazardous materials and the generation of hazardous waste are less than significant.

Radioactive Materials

Radioactive materials would not be used in the proposed project.

Building Materials

The 2003 LRDP EIR finds that demolition or renovation of buildings under the 2003 LRDP would not expose construction workers or campus occupants to a significant risk from building materials contaminated with lead and asbestos (LRDP Impact 4.7-13). To further reduce this less-than-significant impact, LRDP Mitigation 4.7-13, which requires that the campus survey buildings for potential lead and asbestos contamination before any demolition or renovation

work is performed, has been utilized by the proposed project. Following standard campus procedures, once a construction schedule has been established, the campus offices of Architects and Engineers and Facilities would conduct a survey of the area to be renovated for lead-based paint and asbestos-containing building materials. EH&S would also work with the Architects and Engineers to discuss the need for decontamination of any building materials that have been contaminated as a result of past uses. Following decontamination, EH&S would test to verify that the space has been cleaned.

Furthermore, 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 policy and Cal/OSHA regulations minimize the exposure of construction workers to contaminants. In addition, if contaminants are identified on the project site, the campus would coordinate site remediation.

- b) The 2003 LRDP EIR finds 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 (LRDP 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, LRDP Mitigation 4.7-9 will be implemented.

The quantities of biohazardous materials stored in the proposed laboratory would be too small to pose a significant hazard to the public or the environment in the event of an earthquake. When not in use, the pathogens would be stored in sealed plastic vials in cardboard boxes inside a locked freezer, preventing a release resulting from breakage of containers. Any pathogens in use would be present in such small quantities that any spills resulting from seismic shaking could be cleaned up using standard BSL 2 and BSL 3 laboratory practices. Campus firefighters and the campus hazardous materials response team are trained to handle incidents involving biohazardous materials. EH&S provides these emergency response personnel with information on the unique hazards associated with specific campus facilities, including the Building J-1 Laboratory. Therefore, the potential hazard would be a less-than-significant impact.

- c) There are no existing or planned schools or childcare centers within ¼ mile of the project site. Therefore, there would be no impact.
- d) The Laboratory for Energy Related Research/South Campus Disposal site is the only campus site that was listed as a hazardous materials site pursuant to Government Code Section 65962.5. The proposed project would not disturb this site.
- e) The 2003 LRDP EIR finds 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 located on the west campus and would not conflict with airport operations. Therefore, there would be no impact.
- 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 finds that implementation of the 2003 LRDP could interfere with the campus' Emergency Operations Plan through construction-related road closures (LRDP Impact 4.7-17). Construction of the proposed project would not require any road closures. 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 not located along Putah Creek. Therefore, no impact would occur.

Summary

LRDP Mitigations 4.7-1, 4.7-2(a) and (b), 4.7-5(a) and (b), 4.7-6(a) and (b), 4.7-7(a) and (b) and (c), 4.7-8, 4.7-9 and 4.7-13 are relevant to the proposed project to reduce the significance of hazards and hazardous materials impacts. 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 Mayacmas 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 only major 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, 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.

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 transports this water 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 measured 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. 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

Stormwater drainage from the project site flows into drainage inlets within the project site. The underground system drains to a surface swale at the east side of the South Campus. The surface swale provides adequate gradient to transport water south to Putah Creek. The proposed project would take place on an existing impervious surface and would not increase the amount or type of stormwater runoff.

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.

2003 LRDP EIR Impacts HYDROLOGY & WATER QUALITY		Level of Significance Prior to Mitigation	Level of Significance After Mitigation
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.	LS	LS
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.	PS	LS
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.	S	SU

2003 LRDP EIR Impacts HYDROLOGY & WATER QUALITY		Level of Significance Prior to Mitigation	Level of Significance After Mitigation
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.	PS	LS
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.	S	SU

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 or Negative Declaration. 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. |
| 4.8-4(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: <ul style="list-style-type: none"> (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 |

2003 LRDP EIR Mitigation Measures
HYDROLOGY & WATER QUALITY

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.
- 4.8-12 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)

7.8.4 Environmental Checklist and Discussion

HYDROLOGY & WATER QUALITY		Potentially Significant Impact	Less than Significant with Mitigation	Impact for which 2003 LRDP EIR is Sufficient	Less than Significant Impact	No Impact
Would the project...						
a)	Violate any water quality standards or waste discharge requirements?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
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)?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
f)	Otherwise substantially degrade water quality?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
h)	Place within a 100-year flood hazard area structures which would impede or redirect flood flows?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
j)	Inundation by seiche, tsunami, or mudflow?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

a,f) **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. However, because the proposed project would take place on a previously developed site, the amount of impervious surface would not increase and the existing drainage pattern would not change. No operations impacts would occur to drainage or site runoff.

b) **Deep Aquifer**

Although water consumption from the proposed project has not been calculated, it is expected to be less than the typical amount of water usage for a similar size research laboratory and to be approximately the same as the water demand that was used when the north wing of Building J-1 was last used for research purposes. 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.

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: 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 use no water from the shallow/intermediate aquifer. No impact would occur.

- c,d,e) The proposed project would not alter the amount of impervious surfaces or the drainage pattern at the site. No impact would occur.
- g) Under the 2003 LRDP, housing (including on-campus student housing and housing within the proposed neighborhood) would be constructed outside the 100-year flood zones on campus (see

2003 LRDP EIR, Figure 4.8-4, 100-Year Floodplain). The proposed project includes no housing. Therefore, no impact would occur.

- h, i) The 2003 LRDP EIR found that development under the 2003 LRDP could place non-residential structures within a 100-year floodplain, which could expose people and structures to risks associated with flooding and/or could impede or redirect flows, contributing to flood hazards (LRDP Impact 4.8-9). The proposed project would not be located within a 100-year floodplain. The potential impact would be less than significant.

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, including the project site, as a result of a dam failure is considered 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, 4.8-4 (a,b), 4.8-5 (a-d), 4.8-12, and 4.8-13 (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 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 surrounded by one-story research buildings used for research. The 2003 LRDP designated the site as an *Academic/Administrative Low Density* land use. Buildings in the project area were constructed in the 1960’s and are mostly screened from view by mature landscaping.

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

LAND USE & PLANNING	Potentially Significant Impact	Less than Significant with Mitigation	Impact for which 2003 LRDP EIR is Sufficient	Less than Significant Impact	No Impact
Would the project...					
a) Physically divide an established community?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
c) Conflict with any applicable habitat conservation plan or natural community conservation plan?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
d) Result in development of land uses that are substantially incompatible with existing adjacent land uses or with planned uses?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

- a) The proposed project would have no potential to physically divide an established community. No impact would occur.
- b) The applicable land use plan for the campus is the 2003 LRDP. The proposed research use is consistent with the *Academic and Administrative* land use designation of the site. The project would not conflict with the UC Davis 2003 LRDP. 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-effect HCPs for Valley Elderberry Longhorn Beetles (VELB) at Russell Ranch. The project is located four miles from the 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. The proposed project is compatible with adjacent land uses and is similar to the surrounding land uses at the Center for Laboratory Science. 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

MINERAL RESOURCES	Potentially Significant Impact	Less than Significant with Mitigation	Impact for which 2003 LRDP EIR is Sufficient	Less than Significant Impact	No Impact
Would the project...					
a) Result in the loss of availability of a known mineral resource that would be of value to the region and the residents of the state?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

- 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

Noise levels at the project site are typically low. Background noise includes vehicle noise from Old Davis Road and from Interstate 80. The project site is approximately 1,100 feet from the center line of the Union Pacific railroad tracks.

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. For the proposed project, construction noise impacts to nearby research buildings the most applicable threshold. The construction criteria from Table 4.10-3 of the 2003 LRDP EIR are reprinted below.

Table 7.11.2: Thresholds of Significance for Noise Evaluations

Noise Source ^a	Criterion Noise Level ^b	Substantial Increase in Noise Level ^b
Construction (temporary)	80 dBA L _{eq (8h)} ^c daytime (7:00 a-7:00 p) 80 dBA L _{eq (8h)} evening (7:00 p-11:00 p) 70 dBA L _{eq (8h)} nighttime (11:00 p-7:00 a)	Not Applicable

Source: 2003 LRDP EIR

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

^c L_{eq (8h)} 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 project is within the scope of analysis in the 2003 LRDP EIR. Significant and potentially significant noise 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 4.10-2 but this impact is identified as significant and unavoidable because of the uncertainty regarding mitigation feasibility and effectiveness, and because mitigation falls within other jurisdictions to enforce and monitor and therefore cannot be guaranteed by the University of California.

2003 LRDP EIR Impacts		Level of Significance Prior to Mitigation	Level of Significance After Mitigation
4.10-1	Construction of campus facilities pursuant to the 2003 LRDP could expose nearby receptors to excessive groundborne vibration and airborne or groundborne noise.	PS	LS
4.10-2	Implementation of the 2003 LRDP would result in increased vehicular traffic on the regional road network, which would substantially increase ambient noise levels at some locations.	S	SU

2003 LRDP EIR Impacts		Level of Significance Prior to Mitigation	Level of Significance After Mitigation
NOISE			
4.10-5	The 2003 LRDP development in combination with other regional development would increase ambient noise levels.	S	SU

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 or Negative Declaration. 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.
- 4.10-2(a) For noise-sensitive uses adjacent to Russell Boulevard between Arlington Boulevard and Arthur Street, the existing soundwall (approximately 6.5 feet in height) could be increased slightly in height and extended to include the daycare center to the east.
- For noise-sensitive uses adjacent to Russell Boulevard between Arthur Street and SR 113, and from SR 113 to La Rue/Anderson Road and from La Rue Road to Oak Street, soundwalls may be constructed for exterior residential and recreational land uses within approximately 100 feet of the centerline of Russell Boulevard, where construction of such walls would not interfere with driveway access.
- The campus shall reimburse the City of Davis the campus' fair share of the cost of a City of Davis' noise abatement program for reducing interior noise levels in homes along Russell Boulevard that are significantly affected by noise from 2003 LRDP-related traffic growth. The campus' contribution to the City's noise abatement program could be used to extend sound walls as described above or for other noise abatement measures such as retrofit of homes. The campus' fair share shall be determined based on the volume of traffic added to Russell Boulevard by the campus as a result of 2003 LRDP implementation and the percentage that 2003 LRDP-related traffic increases constitute of the average daily traffic on the roadway.
- 4.10-2(b) For components of the 2003 LRDP having future noise-sensitive land uses such as the Neighborhood and Research Park, building and area layouts shall incorporate noise control as a design feature; including

2003 LRDP EIR Mitigation Measures

NOISE

increased setbacks, landscaped berms, and using building placement to shield noise-sensitive exterior areas from direct roadway views.

4.10-5 Implement LRDP Mitigations 4.10-1 and 4.10-2.

7.11.4 Environmental Checklist and Discussion

NOISE	Potentially Significant Impact	Less than Significant with Mitigation	Impact for which 2003 LRDP EIR is Sufficient	Less than Significant Impact	No Impact
Would the project...					
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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b) Exposure of persons to or generation of excessive groundborne vibration or groundborne noise levels?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
c) A substantial permanent increase in ambient noise levels in the project vicinity above levels existing without the project?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
d) A substantial temporary or periodic increase in ambient noise levels in the project vicinity above levels existing without the project?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

a) The proposed project is not expected to expose people to noise levels in excess of the adopted UC Davis standards. Occupants of the building would be exposed to low levels of roadway noise and noise from mechanical air handling equipment. The extensive use of sealed doorways and the lack of windows will reduce all interior noise to very minor levels within the building and building occupants are expected to spend only minor amounts of time outside. The expected impact would be less than significant.

b,d) The proposed project would include a short period of asphalt and concrete removal that could include concrete cutting and jackhammering. 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). 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. 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.

- c) Generation of noise levels on or adjacent to the project site associated with vehicle trips and mechanical equipment would contribute to ambient noise levels on campus. The 2003 LRDP EIR found that implementation of the 2003 LRDP would result in increased vehicular traffic on the regional road network, which would substantially increase ambient noise levels at the following locations through 2015-16: Russell Boulevard, just west of Arlington; the west campus neighborhood site adjacent to SR 113; and on Hutchison Drive west of SR 113 (Impact 4.10-2). The proposed project would result in an additional 10 staff members at UC Davis which would incrementally contribute to roadway volumes and associated roadway noise. LRDP Mitigation 4.10-2(a-b) would address this impact by requiring specific noise abatement and noise control programs on campus and in the City of Davis. However, the campus cannot ensure that LRDP Mitigation 4.10-2(a) would be implemented by the City, and it is uncertain whether this measure would effectively reduce noise to acceptable levels. Therefore, the impact would still be 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 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. LRDP Impact 4.10-2 addresses traffic noise impacts on and adjacent to the campus associated with the 2003 LRDP and cumulative growth. LRDP Mitigation 4.10-5 would require implementation of the noise control and abatement measures identified in LRDP Mitigation 4.10-2(a-b). However, as discussed above, the effectiveness and implementation of LRDP Mitigation 4.10-2(a) cannot be ensured. Therefore, the 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 proposed project is approximately two miles from the University Airport and would not be affected by airport operations. 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, 4.10-2 (a,b), 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

No housing is located or planned on or adjacent to the project site.

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. A significant population and housing impact identified in the 2003 LRDP EIR that is relevant to the proposed project is presented

below with its corresponding levels of significance. No mitigation was available to reduce the magnitude of this impact, so the impact is considered significant and unavoidable.

2003 LRDP EIR Impacts POPULATION & HOUSING		Level of Significance Prior to Mitigation	Level of Significance After Mitigation
4.11-1	Implementation of the 2003 LRDP would directly induce substantial population growth in the area by proposing increased enrollment and additional employment. ¹	S	SU

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

¹ No mitigation is available to reduce the magnitude of this impact.

7.12.4 Environmental Checklist and Discussion

POPULATION & HOUSING	Potentially Significant Impact	Less than Significant with Mitigation	Impact for which 2003 LRDP EIR is Sufficient	Less than Significant Impact	No Impact
Would the project...					
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)?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b) Displace substantial numbers of existing housing, necessitating the construction of replacement housing elsewhere?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
c) Displace substantial numbers of people, necessitating the construction of replacement housing elsewhere?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
d) Create a demand for housing that cannot be accommodated by local jurisdictions?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

a) The proposed project would add approximately 10 people to the campus population. The 2003 LRDP EIR found that implementation of the 2003 LRDP would directly induce substantial population growth in the area by proposing increased enrollment and additional employment (Impact 4.11-1). The impact analyses for all of the resource areas covered in this Initial Study address the campus population increases associated with the project. Where possible, this document mitigates associated environmental impacts to the extent feasible. In certain circumstances, impacts that are associated with campus population growth are identified as significant and unavoidable. Accordingly, the effect of direct population growth associated with the 2003 LRDP, including the proposed project, is also considered a significant and unavoidable impact. 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 proposed project would not include any utility or roadway extensions. Additionally, 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) The proposed project would not displace any existing housing. Therefore, no impact would occur.
- c) The proposed project would not displace substantial numbers of people. Therefore, no impact would occur.
- d) The 2003 LRDP EIR found that future housing in the region is anticipated to adequately accommodate population growth associated with the 2003 LRDP, including the proposed project, as well as other population growth in the region. Therefore, the 2003 LRDP EIR found that the potential for campus growth to create a demand for housing that could not be accommodated by local jurisdictions is a less than significant impact.

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 (DJUSD) 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

There are no existing or planned public service facilities (fire, police, schools or libraries) on or adjacent to the site. The site receives fire and police service from the UC Davis Police and Fire Departments.

7.13.2 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.

7.13.3 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. Mitigation measures are included to reduce the magnitude of cumulative impacts 4.12-6 and 4.12-7, but these impacts are identified as significant and unavoidable because they cannot be fully mitigated.

2003 LRDP EIR Impacts		Level of Significance Prior to Mitigation	Level of Significance After Mitigation
PUBLIC SERVICES			
4.12-6	Implementation of the 2003 LRDP, in conjunction with regional growth, could generate a cumulative demand for new or expanded police and fire service facilities in the region, the construction of which could result in significant adverse environmental impacts to prime farmland and habitat.	S	SU
4.12-7	Implementation of the 2003 LRDP, in conjunction with regional growth, would increase the number of school-age children living in the area. This could generate a cumulative demand for new school facilities, the construction of which could result in significant environmental impacts to agricultural prime farmland and habitat.	S	SU

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 or Negative Declaration. 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

PUBLIC SERVICES

4.12-6	If documented unmitigated significant environmental impacts are caused by the construction of police or fire facilities in the Cities of Davis, Dixon, Woodland, and/or Winters that are needed in part due to implementation of the 2003 LRDP, UC Davis shall negotiate with the appropriate local jurisdiction to
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2003 LRDP EIR Mitigation Measures

PUBLIC SERVICES

determine the campus' fair share (as described in Section 4.12.2.3) of the costs to implement any feasible and required environmental mitigation measures so long as the unmitigated impacts have not been otherwise reduced to less-than-significant levels through regulatory requirements, public funding, or agreements. This mitigation measure shall not apply to any other costs associated with implementation of public service facilities.

- 4.12-7 If documented unmitigated significant environmental impacts are caused by the construction of school facilities in the Cities of Davis, Dixon, Woodland, and/or Winters that are needed in part due to implementation of the 2003 LRDP, UC Davis shall negotiate with the appropriate local jurisdiction to determine the campus' fair share (as described in Section 4.12.2.3) of the costs to implement any feasible and required environmental mitigation measures so long as the unmitigated impacts have not been otherwise reduced to less-than-significant levels through regulatory requirements, public funding, or agreements. This mitigation measure shall not apply to any other costs associated with implementation of public service facilities.

7.13.4 Environmental Checklist and Discussion

PUBLIC SERVICES	Potentially Significant Impact	Less than Significant with Mitigation	Impact for which 2003 LRDP EIR is Sufficient	Less than Significant Impact	No Impact
Would the project...					
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:					
i) Fire protection?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
ii) Police protection?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
iii) Schools?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
iv) Parks?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
v) Other public facilities?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

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

The proposed project would take place on the south campus at UC Davis approximately 300 feet south of Interstate 80 and could increase the campus population by approximately 10 people. The proposed project would incrementally contribute to the demand for campus fire and police services that is anticipated under the 2003 LRDP.

In order to continue to meet the UC Davis Fire Department's standard of responding to 90 percent of campus emergency calls within 6 minutes, the 2003 LRDP EIR found that the campus may need to expand or renovate existing or provide new facilities, supply technologically improved equipment, implement improved management techniques, or hire additional staff for the Department. The 2003 LRDP EIR found that to ensure adequate UC Davis Police Department service for the campus population under the 2003 LRDP, the campus may need to expand existing or provide new facilities, supply technologically improved equipment, or implement improved management techniques for the Department.

While the expansion and construction of police and fire facilities under the 2003 LRDP could contribute to the 2003 LRDP's effects on air, noise, traffic, agriculture, biological resources, cultural resources, utilities, and other resource areas, with the implementation of mitigation in the 2003 LRDP EIR and due to the relatively small areas that would be disturbed, the construction of these facilities would not individually result in significant environmental impacts. Therefore, the environmental impact associated with constructing new or altered facilities in order to maintain adequate levels of UC Davis fire and police services is considered less than significant.

Regional Fire and Police Protection

The 2003 LRDP EIR found that implementation of the 2003 LRDP, in conjunction with regional growth, could generate a cumulative demand for new or expanded police and fire service facilities in the region, the construction of which could result in significant adverse environmental impacts to prime farmland and habitat (Impact 4.12-6). To the extent that an increase in off-campus population associated with the 2003 LRDP, including the proposed project, could contribute to the demand for new police and fire facilities, in compliance with LRDP Mitigation 4.12-6, the campus would negotiate with respective jurisdictions to determine the University's fair share of costs for feasible mitigation to reduce associated significant environmental impacts. The campus' contribution to mitigation for such effects could include implementation of preservation mechanisms for on-campus prime farmland and/or habitat conservation. However, impacts associated with an irreversible loss of prime farmland and habitat could not be mitigated to less-than-significant levels. Therefore, the cumulative impacts related to police and fire facility construction in the Cities of Davis, Winters, Dixon, and Woodland would be 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.

a, iii) Schools

The proposed project would contribute up to 10 people to the campus population which could contribute to the number of school-age dependents living in the region. The 2003 LRDP EIR recognized that implementation of the 2003 LRDP, in conjunction with regional growth, would increase the number of school-age children living in the area. This could generate a cumulative demand for new school facilities, the construction of which could result in significant environmental impacts (Impact 4.12-7). Construction of new schools in the Cities of Davis, Winters, Dixon, and Woodland could result in development of agricultural areas, which could result in the permanent loss of prime farmland and habitat. Other potentially significant environmental impacts are too speculative to determine at this time. To the extent that the school-age dependents of new campus employees could contribute to the demand for new school facilities in these cities, in compliance with LRDP Mitigation 4.12-7, the campus would negotiate with respective school districts to determine the University's fair share of costs for feasible mitigation to reduce associated significant environmental impacts. The campus' contribution to mitigation for such effects could include implementation of preservation mechanisms for on-campus prime farmland and/or habitat conservation. However, impacts associated with an irreversible loss of prime farmland and habitat could not be mitigated to less-than-significant levels. Therefore, the impact related to school construction in the Cities of Davis, Winters, Dixon, and Woodland would be 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.

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

a, v) **Libraries**

The proposed project would contribute up to 10 people to the campus population which could contribute to the use of local libraries in the region. UC Davis provides extensive academic library facilities in four general libraries that serve students, faculty, staff, and the general public, as well as in specialized libraries on campus. With its extensive existing libraries and ongoing update processes, UC Davis has adequate facilities to provide sufficient library services to serve the campus and general population's needs through 2015-16. Therefore, construction of additional library facilities on campus as the result of campus growth under the 2003 LRDP is not anticipated. Furthermore, due to the small scale and infill nature of minor library expansions and renovations that could occur in the Cities of Davis, Dixon, Woodland, and Winters to serve cumulative growth through 2015-16, significant environmental impacts are not anticipated to result. Therefore, project-level and cumulative impacts associated with library services are considered less than significant.

Summary

Mitigation measures 4.12-6 and 4.12-7 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

There are no existing or planned recreation facilities on or adjacent to the 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. A significant recreation impact identified in the 2003 LRDP EIR that is relevant to the proposed project is presented below with its corresponding levels of significance before and after application of mitigation measures identified in the 2003 LRDP EIR. A mitigation measure is included to reduce the magnitude of cumulative impact 4.13-2 but this impact is identified as significant and unavoidable because it cannot be fully mitigated.

2003 LRDP EIR Impacts		Level of Significance Prior to Mitigation	Level of Significance After Mitigation
RECREATION			
4.13-2	Implementation of the 2003 LRDP, together with the cumulative impacts of other regional development, could increase the use of off-campus recreation facilities, the development of which could result in significant environmental impacts.	S	SU

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 or Negative Declaration. 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

RECREATION

4.13-2	If documented unmitigated significant environmental impacts are caused by the construction of recreation facilities in the Cities of Dixon, Woodland, and/or Winters that are needed in part due to implementation of the 2003 LRDP, UC Davis shall negotiate with the appropriate local jurisdiction to determine the campus' fair share (as described in Section 4.12.2.3) of the costs to implement any feasible and required environmental mitigation measures so long as the unmitigated impacts have not been otherwise reduced to less-than-significant levels through regulatory requirements, public funding, or agreements. This mitigation measure shall not apply to any other costs associated with implementation of recreation facilities.
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7.14.4 Environmental Checklist and Discussion

RECREATION	Potentially Significant Impact	Less than Significant with Mitigation	Impact for which 2003 LRDP EIR is Sufficient	Less than Significant Impact	No Impact
Would the project...					
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?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
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?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

- a,b) The proposed project could increase the campus population by approximately 10 people which would incrementally contribute to the demand for parks and recreation facilities on and off campus.

The 2003 LRDP EIR found that increased population at UC Davis under the 2003 LRDP, including the population growth associated with the proposed project, is expected to result in increased demand for and usage of campus recreation facilities. However, to counteract the effects of increased usage, it is campus practice to increase maintenance levels of recreation facilities in response to increases in demand. In addition, the 2003 LRDP designates

approximately 18 acres of land west of SR 113 for future recreation fields. The 2003 LRDP also designates land for greenbelts to the west of State Route 113, expansion of the campus Arboretum, expansion of the Putah Creek Riparian Reserve, and enhanced formal open space (garden walks and formal courtyards) within the central campus. The construction of new facilities would take place when warranted by increased demand and when financially feasible. The campus practice of increasing maintenance activities and the planned construction of new facilities would prevent the deterioration of existing recreation facilities, resulting in a less than significant impact.

The 2003 LRDP EIR found that implementation of the 2003 LRDP, together with other regional growth, could result in the development of parks and recreation facilities off-campus that could result in significant environmental impacts (Impact 4.13-2). Depending on the site, development of new parks and recreation facilities in the cities of Dixon, Winters, and Woodland could result in impacts such as loss of prime farmland or valuable habitat. However, environmental impacts are too speculative to determine at this time. In compliance with LRDP Mitigation 4.13-2, the campus would negotiate with respective jurisdictions to determine the University's fair share of costs for feasible mitigation to reduce associated significant environmental impacts, if any. Due to the speculative nature of this cumulative impact, it 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 measure 4.13-2 from the 2003 LRDP EIR is relevant to the proposed project to reduce the significance of recreation-related impacts to the extent feasible. With the implementation of this measure, 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 Road, 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 served by Old Davis Road with direct access to Interstate 80 and to the UC Davis central campus. Bike access to the site is provided via the bike path adjacent to Old Davis Road.

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. Mitigation measures are included to reduce the magnitude of impact 4.14-2, 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.

2003 LRDP EIR Impacts TRANSPORTATION, CIRCULATION, & PARKING		Level of Significance Prior to Mitigation	Level of Significance After Mitigation
4.14-1	Implementation of the 2003 LRDP would cause unacceptable intersection operations at on-campus intersections.	S	LS
4.14-2	Implementation of the 2003 LRDP would cause unacceptable intersection and freeway LOS operations at off-campus facilities, including facilities contained in the Yolo County and Solano County Congestion Management Plans.	S	SU
4.14-3	Implementation of the 2003 LRDP would create additional parking demand.	PS	LS
4.14-4	Implementation of the 2003 LRDP would increase demand for transit services.	PS	LS

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 or Negative Declaration. 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.
4.14-2(a)	UC Davis shall continue to actively pursue Transportation Demand Management strategies to reduce vehicle-trips to and from campus.
4.14-2(b)	UC Davis shall continue to monitor AM and PM peak hour traffic operations at critical intersections and roadways in the campus vicinity at least every three years to identify locations operating below UC Davis, City of Davis, Yolo County, Solano County, or Caltrans LOS thresholds and to identify improvements to restore

2003 LRDP EIR Mitigation Measures
TRANSPORTATION, CIRCULATION, & PARKING

operations to an acceptable level.

- 4.14-2(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 contribute its fair share towards roadway improvements 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 District, and/or major facilities of the west and south campus.
- 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.

7.15.4 Environmental Checklist and Discussion

TRANSPORTATION, CIRCULATION, & PARKING	Potentially Significant Impact	Less than Significant with Mitigation	Impact for which 2003 LRDP EIR is Sufficient	Less than Significant Impact	No Impact
Would the project...					
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)?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b) Exceed, either individually or cumulatively, a level of service standard established by the county congestion management agency for designated roads or highways?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
d) Substantially increase hazards due to a design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
e) Result in inadequate emergency access?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
f) Result in inadequate parking capacity?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
g) Conflict with applicable adopted policies, plans, or programs supporting alternative transportation (e.g., bus turnouts, bicycle racks)?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

a,b) The proposed project would result in an increase to the campus population of approximately 10 people and an associated very small addition of daily vehicle trips. 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). LRDP Mitigation 4.14-1(a-c), included in the proposed project, 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 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) and the proposed project would contribute to vehicle trips made to these off-campus locations. LRDP Mitigation 4.14-2(a-c), included in the proposed project, 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 operations will degrade to unacceptable levels, and contribute fair share costs to roadway improvements if operations degrade. Because the feasibility and/or implementation of off-campus roadway and intersection improvements is ultimately within the jurisdiction of other authorities and cannot be guaranteed by the University, 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.

- c) Impacts related to safety risks associated with the UC Davis airport are discussed in Section 7.7, Hazards and Hazardous Materials.
- d) The proposed project would not make any changes to the roadway network and would not create or increase hazards due to design features such as dangerous intersections or incompatible uses and the proposed project would not contribute to increased bicycles, pedestrians, and transit use on the core campus. No impact would occur.
- e) Impacts related to emergency access are discussed in Section 7.7, Hazards and Hazardous Materials.
- f) Approximately 10 parking spaces would be needed to serve the increased population that could result from the proposed project. The 2003 LRDP EIR identified that implementation of the 2003 LRDP would create additional parking demand (Impact 4.14-3). In compliance with LRDP Mitigation 4.14-3(a-b), included in 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. Recent parking conditions on the south campus indicate that sufficient spaces are available to serve the potential increase of 10 vehicles. With implementation of measures identified in the 2003 LRDP EIR, this impact would be less than significant.
- g) The proposed project would increase the campus population by approximately 10 people. 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 caused 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), 4.14-2 (a-c), 4.14-3 (a,b), and 4.14-4 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
- Steam
- Electricity
- Natural Gas
- 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 use campus utilities and service systems including domestic water, wastewater, storm drainage, solid waste, 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 utilize existing connections within Building J-1.
- **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 project would utilize existing connections within Building J-1.
- **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 it is pumped to the South Fork of Putah Creek during large storm events. The proposed project would not connect to the central campus drainage system but it would connect to the underground

drainage system in the south campus. Runoff quantities and locations after construction of the project would not change from the existing condition.

- **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 PG&E at the campus substation located south of I-80 and from an approximately 2.7 MW cogeneration plant located on the core campus in the CHCP facility. 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 project would utilize existing connections within Building J-1.
- **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 project would utilize existing connections within Building J-1.
- **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 project would utilize existing connections within Building J-1.

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. Mitigation measures are included to reduce the magnitude of project-level impact 4.15-7 and cumulative impact 4.15-10, but these impacts are identified as significant and unavoidable because they cannot be fully mitigated.

2003 LRDP EIR Impacts UTILITIES & SERVICE SYSTEMS		Level of Significance Prior to Mitigation	Level of Significance After Mitigation
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.	LS	LS
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.	LS	LS
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.	LS	LS
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.	LS	LS
4.15-7	Implementation of the 2003 LRDP would require the expansion of natural gas transmission systems, which would result in environmental impacts.	LS	LS
4.15-9	Implementation of the 2003 LRDP would require expansion of campus communication facilities, which would not result in significant environmental impacts.	LS	LS
4.15-10	Implementation of the 2003 LRDP together with other regional development could generate a cumulative demand for wastewater treatment facilities in the region, the construction of which could result in significant environmental impacts on habitat.	S	SU

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 or Negative Declaration. 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).
- 4.15-3 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.
- 4.15-7(a) Once preliminary project design is developed, the campus shall review each project to determine whether existing capacity of the natural gas supply pipeline at the point of connection is adequate. If the capacity of the pipeline is determined inadequate, the system will be updated to provide adequate service to the project site prior to occupation or operation.
- 4.15-7(b) To minimize disturbance to archaeological resources associated with CA-Yol-118, PG&E can and should implement directional drilling or other alternative means to trenching, or should have a qualified archaeological monitor present and provide a representative of the local Native American community an opportunity to monitor during construction.
- 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.
- 4.15-10 If documented unmitigated significant environmental impacts are caused by the construction of wastewater treatment facilities in the Cities of Davis, Dixon, Woodland, and/or Winters that are needed in part due to implementation of the 2003 LRDP, UC Davis shall negotiate with the appropriate local jurisdiction to determine the campus' fair share (as described in Section 4.12.2.3) of the costs to implement any feasible and required environmental mitigation measures so long as the unmitigated impacts have not been otherwise reduced to less-than-significant levels through regulatory requirements, public funding, or agreements. This mitigation measure shall not apply to any other costs associated with implementation of utilities or service systems.
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7.16.4 Environmental Checklist and Discussion

UTILITIES & SERVICE SYSTEMS		Potentially Significant Impact	Less than Significant with Mitigation	Impact for which 2003 LRDP EIR is Sufficient	Less than Significant Impact	No Impact
Would the project...						
a)	Exceed wastewater treatment requirements of the applicable Regional Water Quality Control Board?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
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?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
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?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
d)	Have sufficient water supplies available to serve the project from existing entitlements and resources, or are new or expanded entitlements needed?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
f)	Be served by a landfill with sufficient permitted capacity to accommodate the project's solid waste disposal needs?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
g)	Comply with federal, state, and local statutes and regulations related to solid waste?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
h)	Require or result in the construction or expansion of electrical, natural gas, chilled water, or steam facilities, which would cause significant environmental impacts?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
i)	Require or result in the construction or expansion of telecommunication facilities, which would cause significant environmental impacts?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

a) The proposed project would result in increased effluent to the campus WWTP due to the increased campus population of approximately 10 employees and the resumption of laboratory activities within the north wing of Building J-1. The proposed research would use a typical amount of water for a that would mostly result from restroom usage and from handwashing. The increased generation of effluent has not been quantified but is expected to be very small in comparison the permitted capacity of the WWTP. 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 proposed project would utilize the existing connection to the campus domestic water system that is in Building J-1 and amount of water would be similar to the amounts previously used within Building J-1. 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). 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.

Utility Water Facilities

No utility water would be needed. No impact would occur.

Wastewater Facilities

The proposed project would utilize the existing connection within Building J-1 but the increased volume from 10 laboratory employees is expected to be very small. 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.

The proposed project would increase the regional population by approximately 10 people. This would contribute to the cumulative demand for wastewater treatment facilities in the region, which the 2003 LRDP EIR recognized could result in significant environmental impacts (Impact 4.15-10). Because expansion of wastewater treatment facilities in local jurisdictions could require development on agricultural land, loss of farmland and/or habitat could result. To the extent that an increase in off-campus population associated with the 2003 LRDP, including the proposed project, could contribute to the demand for wastewater treatment, in compliance with LRDP Mitigation 4.15-10, the campus would negotiate with the affected jurisdictions to determine the University's fair share of costs for feasible mitigation to reduce associated significant environmental impacts. The campus' contribution to mitigation could include implementation of preservation mechanisms for on-campus prime farmland and/or habitat conservation. However, impacts associated with an irreversible loss of prime farmland and habitat could not be mitigated to less-than-significant levels. Therefore, the cumulative impacts related to wastewater treatment facility construction in the Cities of Davis, Winters, Dixon, and Woodland would be 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) Storm drainage at the site would not increase and would not be modified. No impact would occur.
- d) The proposed project would utilize water from the deep aquifer for domestic and fire suppression purposes. The expected demand is very small due to the small size of the proposed project and would be approximately the same demand as was previously used for the north wing of Building J-1. Impacts associated with the project's demand for water from the deep aquifer is 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. The proposed project is expected to result in no need to upgrade the campus WWTP and would increase effluent a minimal amount that would be similar to the volumes previously generated at Building J-1. Therefore, this impact would be less than significant.
- f) The waste disposal needs of the proposed project would be served by the campus landfill. The proposed project would generate a small amount of solid waste that could be accommodated at the campus landfill. 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) The proposed project would result in animal carcasses that would need disposal after autoclave decontamination. Animal carcasses from Building J-1 would be handled in accordance with campus policy and would be collected by a contractor and disposed off-site after incineration. The proposed project would comply with all applicable statutes and regulations related to solid waste. Therefore, no impact would occur.
- h) The proposed project would result in increased demand to the campus electricity and natural gas systems. The 2003 LRDP EIR identified that growth under the 2003 LRDP would require the expansion of the campus electrical system and the campus/PG&E natural gas transmission systems (LRDP Impacts 4.15-4 and 4.15-6). The proposed project would connect to the existing service locations within Building J-1 and would not result in an immediate need to increase the campus systems. The environmental effects associated with utility extensions would be less than significant. LRDP Mitigations 4.15-6(a,b), 4.15-7(a), 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.

- i) Telecommunications for the proposed project would be provided from existing service lines within Building J-1 and no expanded facilities would be required to serve the project. 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). 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.

Summary

Mitigation measures 4.15-1 (a,b), 4.15-3, 4.15-4, 4.15-6 (a,b), 4.15-7 (a,b), 4.15-9, 4.15-10 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

MANDATORY FINDINGS OF SIGNIFICANCE	Potentially Significant Impact	Less than Significant with Mitigation	Impact for which 2003 LRDP EIR is Sufficient	Less than Significant Impact	No Impact
Would the project...					
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?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b) Does the project have impacts that are individually limited, but cumulatively considerable? ("Cumulatively considerable" 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)?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
c) Does the project have environmental effects that will cause substantial adverse effects on human beings, either directly or indirectly?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

- 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: aesthetics, agriculture resources, cultural resources, geology and soils, hazards and hazardous materials, hydrology and water quality, noise, population and housing, public services, recreation, transportation/circulation, and utilities and service systems. It would incrementally contribute to, but would not exceed, significant and unavoidable impacts related to: air quality, biological resources, hazards and hazardous materials, hydrology and water quality, noise, population and housing, public services, recreation, transportation/circulation, and utilities and service systems. 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

Pay Fee

9 REFERENCES

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APPENDIX A
PROPOSED NEGATIVE DECLARATION

PROPOSED NEGATIVE DECLARATION

Lead Agency: University of California

Project Proponent: University of California, Davis

Project Location: Building J-1 Renovation and Upgrade

Project Description: The proposed UC Davis Building J-1 Renovation and Upgrade would renovate and expand an existing building to provide increased laboratory and office space. The existing Building J-1 consists of approximately 23,000 square feet that was designed, constructed, and operated for infectious agent containment research. However, the north wing is currently being used as storage space due to deficiencies in meeting current standards for infectious agent containment. The proposed project would renovate approximately 1,550 square feet within the north wing of Building J-1 to provide improved animal holding, laboratory containment rooms, and upgraded air handling capabilities. The project would expand the building approximately 400 square feet by constructing an exterior corridor along the north and east sides of the north wing of Building J-1. The new exterior corridors would facilitate the renovation project for research with infectious agents requiring Biosafety Level 3 (BSL 3) containment. In total, the proposed project would provide a total of 1,130 square feet of BSL 3 space. Building J-1 is located on the South Campus at UC Davis at the Center for Laboratory Animal Science and is approximately 150 feet east of Old Davis Road and approximately 300 feet south of Interstate 80.

Reference: This Proposed Mitigated Negative Declaration incorporates by reference in their entirety the text of the Tiered Initial Study prepared for the project, the 2003 LRDP, and the 2003 LRDP EIR.

Determination: In accordance with CEQA, a Draft Tiered Initial Study has been prepared by UC Davis that evaluates the environmental effects of the proposed project. On the basis of the project's Draft Tiered Initial Study the campus found that the proposed project could 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.

Public Review: In accordance with Section 15073 of the CEQA Guidelines, the Draft Tiered Initial Study for the project will be circulated for public and agency review from June 7 to July 7, 2006. Comments received during the review period and responses to these comments will be presented in the final Tiered Initial Study.