UC DAVIS

BOOKSTORE TEMPORARY RELOCATION PROJECT

Draft Tiered Initial Study and Proposed Negative Declaration

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

Prepared By:

ENVIRONMENTAL STEWARDSHIP AND SUSTAINABILITY

University of California
One Shields Avenue
376 Mrak Hall
Davis, California 95616

December 2010

Contact: A. Sidney England, Assistant Vice Chancellor for Environmental Stewardship and Sustainability
530-752-2432
# TABLE OF CONTENTS

1. **PROJECT INFORMATION**

2. **INTRODUCTION**

3. **PROJECT DESCRIPTION**

4. **CONSISTENCY WITH THE 2003 LRDP AND 2003 LRDP EIR**

5. **ENVIRONMENTAL RESOURCES POTENTIALLY AFFECTED**

6. **DETERMINATION**

7. **EVALUATION OF ENVIRONMENTAL IMPACTS**
   - 7.1 **Aesthetics**
   - 7.2 **Agricultural Resources**
   - 7.3 **Air Quality**
   - 7.4 **Biological Resources**
   - 7.5 **Cultural Resources**
   - 7.6 **Geology, Soils, & Seismicity**
   - 7.7 **Greenhouse Gas Emissions**
   - 7.8 **Hazards & Hazardous Materials**
   - 7.9 **Hydrology & Water Quality**
   - 7.10 **Land Use & Planning**
   - 7.11 **Mineral Resources**
   - 7.12 **Noise**
   - 7.13 **Population & Housing**
   - 7.14 **Public Services**
   - 7.15 **Recreation**
   - 7.16 **Transportation, Circulation, & Parking**
   - 7.17 **Utilities & Service Systems**
   - 7.18 **Mandatory Findings of Significance**

8. **FISH & GAME DETERMINATION**

9. **REFERENCES**

10. **AGENCIES & PERSONS CONSULTED**

11. **REPORT PREPARERS**

**Appendix A.** Negative Declaration
LIST OF FIGURES

Figure 1. Regional Location 9
Figure 2. Project Location 11
Figure 3. Temporary Bookstore Site Plan 13
Figure 3. Gate Relocation Plan 15
1 PROJECT INFORMATION

Project title:

Bookstore Temporary Relocation Project

Project location:

University of California, Davis
Yolo County

Lead agency’s name and address:

The Regents of the University of California
1111 Franklin Street
Oakland, CA 94607

Contact person:

A. Sidney England, Assistant Vice Chancellor for Environmental Stewardship and Sustainability, 530-752-2432

Project sponsor’s name and address:

Environmental Stewardship and Sustainability
University of California
One Shields Avenue
436 Mrak Hall
Davis, CA 95616-8678

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 Environmental Stewardship and Sustainability in 436 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
2 INTRODUCTION

2.1 INITIAL STUDY

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

2.2 TIERING PROCESS

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]).

This Initial Study 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.

By tiering from the 2003 LRDP EIR, this Tiered Initial Study will 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.
This Initial Study will evaluate the potential environmental impacts of the proposed project with respect to the 2003 LRDP EIR to determine what level of additional environmental review, if any, is appropriate. As shown in the Determination in Section 6 of this document, and based on the analysis contained in this 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 that were not adequately addressed by the 2003 LRDP EIR.

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

**RELATIONSHIP TO MEMORIAL UNION BOOKSTORE RENOVATION AND EXPANSION PROJECT**

The proposed project is related to a recently approved UC Davis project titled the Memorial Union Bookstore Renovation and Expansion Project (State Clearinghouse Number 2009092079). The CEQA review for the prior project considered the environmental effects of renovating and expanding the existing main UC Davis bookstore at the Memorial Union complex. The environmental impacts of the renovation and expansion project were considered in the prior Initial Study and the environmental impacts of increased campus space contributing to cumulative impacts that had been previously identified in the 2003 LRDP EIR were also assessed in the prior Initial Study.

At the time of the Memorial Union Bookstore Renovation and Expansion Initial Study and Negative Declaration, the campus planned to maintain the existing book sales in operation while the building renovation and expansion at the Memorial Union were being conducted. This plan would have required shifting of retail sales to multiple areas within the existing building to avoid active areas of construction and then a move to the expanded bookstore space so that the final renovation components could be completed. After detailed investigation, the plan for maintaining sales at the construction site proved infeasible and the campus began studying alternative solutions for a temporary off-site bookstore solution.

The project evaluated in this Initial Study—the proposed construction of a temporary building at the Silo parking lot and associated road improvements to Hutchison Drive emerged as the best option for maintaining campus bookstore operations during renovation and expansion at the Memorial Union. As envisioned, the temporary building and the road improvements would be constructed prior to the start of renovation and expansion at the Memorial Union. Once the temporary building and the road improvements are complete, the Memorial Union bookstore would be closed for renovation and expansion. After completion of the renovation and expansion, the temporary bookstore would close and bookstore operations would resume at the Memorial Union. Therefore, the proposed project evaluated in this Initial Study is the construction of the temporary building and no long-term consideration of on-going use of the temporary building. The proposed road improvements contribute to the long-term plan for operating and improving Hutchison Drive and these improvements are considered permanent for the purposes of this CEQA evaluation.
2.3 PUBLIC AND AGENCY REVIEW

This Initial Study will be circulated for public and agency review from December 16, 2010 to January 14, 2011. Copies of this document, the 2003 LRDP, and the 2003 LRDP EIR are available for review at the following locations:

- UC Davis Environmental Stewardship and Sustainability in 436 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

Comments on this Initial Study must be received by 5:00 PM on January 14, 2011 and can be e-mailed to medulcich@ucdavis.edu or sent to:

A. Sidney England
Assistant Vice Chancellor – Environmental Stewardship and Sustainability
University of California
One Shields Avenue
436 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 Chancellor by The Board of Regents of the University of California (The Regents) and is expected to be considered for approval in January 2011.

2.5 ORGANIZATION OF THE INITIAL STUDY

This 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 Initial Study's relationship to the 2003 LRDP EIR, the scope of the document, the project's review and approval processes, and the document's organization.

Section 3 – Project Description: includes a description of the proposed project, including the need for the project, the project’s objectives, and the elements included in the project.
Section 4 – Consistency with the 2003 LRDP: describes the consistency of the proposed project with the 2003 LRDP and 2003 LRDP EIR.

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

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

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

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

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

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

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

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

3.2 PROJECT OVERVIEW

UC Davis proposes to construct a temporary structure of approximately 18,000 square feet and relocate a campus entry gate to expand the campus area closed to private vehicles. The temporary structure would be located on approximately two acres south of Hutchison Drive on Parking Lot 43 immediately west of the Silo food service area (Figure 2). The proposed project is related to the Memorial Union Bookstore Expansion and Renovation Project which was previously evaluated (State Clearinghouse Number 2009092079). The CEQA review for the prior project considered the environmental effects of renovating and expanding the existing main UC Davis bookstore at the Memorial Union complex. The environmental impacts of the renovation and expansion project were considered in the prior Initial Study and the environmental impacts of increased campus space contributing to cumulative impacts that had been previously identified in the 2003 LRDP EIR were also assessed in the prior Initial Study.

At the time of the Memorial Union Bookstore Renovation and Expansion Initial Study and Negative Declaration, the campus planned to maintain the existing book sales in operation while the building renovation and expansion at the Memorial Union were being conducted. This plan would have required shifting of retail sales to multiple areas within the existing building to avoid active areas of construction and then a move to the expanded bookstore space so that the final renovation components could be completed. After detailed investigation, the plan for maintaining sales at the construction site proved infeasible and the campus began studying alternative solutions for a temporary off-site bookstore solution.

Construction of the temporary building would remove approximately 80 parking spaces from use. Initially, the temporary building would provide space to operate bookstore sales during the planned renovation and expansion of the main campus bookstore. After temporary bookstore use, the temporary building could be used for other temporary uses in need of relocation space during planned construction or renovation of other campus buildings. Alternatively, the temporary building could be dismantled and removed after the bookstore use. After the temporary structure has been removed, there is no proposal to implement a replacement use. Possible options include reuse of the site as a parking lot or construction of a permanent building and consideration of those options, including CEQA evaluation, would take place at
the conclusion of the temporary building occupancy. The proposed site plan for the temporary structure is shown on Figure 3.

The UC Davis campus core is closed to private vehicular access and motorists are required to park outside of the core campus. The existing campus entry gate on Hutchison Drive, west of California Avenue, establishes a barrier restricting public vehicular access and allowing bicycles, transit vehicles, and service vehicles entrance to the closed core campus area. The proposed gate relocation would include removal of the existing campus entry gate along Hutchison Drive immediately west of California Avenue.

The Bookstore Temporary Relocation Project is located west of the existing gate. Closing Parking Lot 43 would reduce parking and introduce new congestion in an already busy area that includes the Hutchison Drive Unitrans Bus Terminal. Improvements to the road circulation as part of the project will alleviate congestion and safety issues. A new campus entry gate would be constructed on Hutchison Drive immediately east of Kleiber Hall Drive. The relocated gate would function similarly to the existing gate and would expand the closed campus area by eliminating private vehicle access to an additional 400 yards of Hutchison Drive between Kleiber Hall Drive and California Avenue. With gate relocation, the campus would reduce the amount of parking available for general campus access and would convert some parking to restricted uses such as service vehicle use and would remove approximately 20 additional parking spaces from use. In total, the proposed project would remove approximately 100 parking spaces from use.

At the new Hutchison gate, the project would include construction of a visitor information area south of Hutchison Drive within Parking Lot 41. The information area would include an information kiosk, short-term parking for arriving visitors, and an area to allow cars and large trucks adequate turnaround space. The project would include a variety of other minor roadway improvements including relocation of a pedestrian crosswalk near the Silo bus terminal, conversion of the Bioletti intersection at Hutchison Drive from stop-sign controlled to a new roundabout, and removal of a bike path from the Bioletti/Hutchison intersection southward toward the Tercero student housing area. Details of the proposed gate relocation elements are shown on Figure 4.

Operation of the new gate would be similar to the existing gate; however, private vehicles with special access needs would be allowed to pass through the new gate. For delivery and pickup of large items or campus users with disabilities, access would be allowed through the gate to utilize parking within the core campus. These accommodations could be made on a regular basis for visitors with recurring access needs or could be made individually for visitors who arrive and have not pre-arranged for permission to pass through the gate. Technology such as telephone access, magnetic cards, key codes, or video conferencing could be employed to allow special access.

During construction of the temporary bookstore, the proposed roadway modifications would be implemented. Prior to the start of construction, an interim gate along Hutchison Drive at Bioletti Way or Kleiber Hall Drive would be installed so that private vehicles are restricted from proceeding to the congested portion of Hutchison Drive near the temporary bookstore construction site.
Figure 2
Projection Locations
Figure 3
Temporary Bookstore Site Plan
Proposed Permanent Gate Location
Interim Temporary Gate Location

Figure 4
Gate Relocation Plan
3.3 PROJECT SITE

The Silo parking lot is approximately two acres approximately 80 parking spaces immediately west of the Silo food services area near the intersection of Hutchison Drive and California Avenue in the UC Davis core campus. The parking lot is accessed from a single driveway on the south side of Hutchison Drive. The drive aisles for the parking lot extend from north to south. The parking lot serves users with campus parking permits and provides parking meters for motorists seeking short-term parking.

In addition to core campus parking, the Silo parking lot serves as a service driveway for large and small vehicles that deliver and pickup items from the Silo food service buildings. The Silo buildings receive daily deliveries of supplies and the delivery trucks utilize the Silo parking lot to approach the building and park during loading and unloading. The parking lot also provides a turnaround area for private vehicles that have approached the Silo area eastbound on Hutchison Drive. These vehicles are not allowed to continue east past the campus entry gate and are not allowed to utilize the bus terminal along the north side of the street. The Silo parking also provides an option for these vehicles to pickup or drop off passengers and then return westbound on Hutchison Drive.

The land uses surrounding the Silo parking lot include Hutchison Drive to the north, a busy arterial street with high volumes of bike, bus, and vehicular use. Across the street from the Silo parking lot on the north side of Hutchison Drive is the Silo bus terminal, a recently constructed facility providing bus service with parking for approximately 16 busses (Figure 3). East of the Silo parking lot is the Silo food service building and the Craft Center building. The food service building is a major campus activity center providing food service for students and employees in the core campus. The Craft Center building provides classes and workspace for non-academic courses in a variety of hobbies and craft activities such as woodworking, weaving, sewing, and metalworking.

South of the project site is a landscaped area with a pedestrian path and a bike path that serve a high volume of campus users. South of the landscaped area is Bainer Hall, a large academic teaching and research building and The Barn, an old campus building currently used for administrative space. West of the project site are the Surge IV temporary buildings that provide administrative space for campus users. These temporary buildings are single-story and have been in use for approximately 30 years.

The 2003 Long Range Development Plan (LRDP) is the guiding land use planning document for the UC Davis campus. The 2003 LRDP land use designation for the project site is Academic and Administrative-High Intensity indicating that the intended long-term use of the project site is for academic and administrative functions with building heights that could exceed four stories.

3.4 PROJECT NEED AND OBJECTIVES

The proposed project is needed to provide temporary space for bookstore sales during construction of the Memorial Union Bookstore Renovation and Expansion Project (State Clearinghouse Number 2009092079) (UC Davis 2010). The campus has completed the planning and design for a major renovation to the campus bookstore and had previously planned on maintaining the existing bookstore in use during the renovation project. To keep the existing bookstore in use during construction would have required extensive efforts to coordinate the construction sequencing and maintain sufficient space for bookstore sales. After detailed investigation, the campus decided to pursue an off-site temporary structure so that the bookstore renovation could proceed unhindered by the need to shift bookstore sales within the construction project.
A university campus needs bookstore sales in order to serve students and faculty with large volumes of book sales at the start of each academic period. After selecting the Silo parking lot and a temporary structure as the most appropriate location and building type to provide the temporary bookstore space, campus identified gate relocation as a secondary effect that would need implementation. Removal of the Silo parking lot from use would prohibit cars from using the parking lot as a turnaround area and would result in cars using the area within Hutchison Drive to turnaround or attempting to use the Silo bus terminal as a turnaround location. These options would obstruct campus operations and would not be feasible. Consequently, the proposed project includes the elements to move the entry gate west and provide an enhanced turnaround area. Moving the entry gate will increase the core campus area that is closed to private motorized vehicles and will reduce conflicts that currently exist between private vehicles and bikes and busses.

The specific objectives of the proposed project are to:

- Provide temporary relocation space for the campus bookstore within the core campus and adjacent to either the Silo or the Memorial Union transit terminals. Close proximity to transit will allow students to easily utilize the temporary bookstore space while carrying purchased materials.

- Locate the temporary bookstore on a core campus site that is available for use and compatible with the operation of a bookstore.

- Improve circulation with relocation of the Hutchison core campus gate.

3.5 PROJECT ELEMENTS

3.5.1 Building and Road Improvements

Temporary Structure
The temporary building would be located on approximately two acres south of Hutchison Drive on Parking Lot 43 immediately west of the Silo food service area. The temporary building would provide space to operate bookstore sales during the planned renovation and expansion of the main campus bookstore. The public entrance to the building would be on the north side and the service entrance would be on the south side of the building. The north side of the building would include a ramp and steps up to the main entrance between the front of the building and the south side of Hutchison Drive. A service drive would on the east, south, and west sides of the temporary bookstore would provide delivery access for the Silo food service buildings, the Craft Center, and the temporary bookstore.

After temporary bookstore use, the temporary building could be used for other temporary uses in need of relocation space during planned construction or renovation of other campus buildings. Alternatively, the temporary building could be dismantled and removed after the bookstore use. After the temporary structure has been removed, there is no proposal to implement a replacement use. Possible options include reuse of the site as a parking lot or construction of a permanent building and consideration of those options would take place at the conclusion of the temporary building occupancy.

Road Improvements
The proposed gate relocation would include removal of the existing campus entry gate along Hutchison Drive immediately west of California Avenue. The existing campus entry gate establishes a barrier restricting public vehicular access and allowing bicycles, transit vehicles, and service vehicles entrance to the closed core campus area. A new campus entry gate would be constructed on Hutchison Drive immediately west of Kleiber Hall Drive. The relocated gate would function similarly to the existing gate.
and would expand the closed campus area by eliminating private vehicle access to approximately 400 yards of Hutchison Drive between Kleiber Hall Drive and California Avenue. With gate relocation, the campus would reduce the amount of parking available for general campus access and would convert some parking to restricted uses such as service vehicle use and would remove approximately 100 parking spaces from use.

At the new Hutchison gate, the project would include construction of a visitor information area south of Hutchison Drive within Parking Lot 41. The information area would include an information kiosk, short-term parking for arriving visitors, and an area to allow cars and large trucks adequate turnaround space. The project would include a variety of other minor roadway improvements including relocation of a pedestrian crosswalk near the Silo bus terminal, conversion of the Bioletti intersection at Hutchison Drive from stop-sign controlled to a new roundabout, and removal of a bike path from the Bioletti/Hutchison south toward the Tercero housing area.

Operation of the new gate would be similar to the existing gate; however, private vehicles with special access needs would be allowed to pass through the new gate. For delivery and pickup of large items or campus users with disabilities, access would be allowed through the gate to utilize parking within the core campus. These accommodations could be made on a regular basis for visitors with recurring access needs or could be made individually for visitors who arrive and have not pre-arranged for permission to pass through the gate. Technology such as telephone access, magnetic cards, key codes, or video conferencing could be employed to allow special access.

During construction of the temporary bookstore, the proposed roadway modifications would be implemented. Prior to the start of construction, an interim gate along Hutchison Drive at Bioletti Way or Kleiber Hall Drive would be installed so that private vehicles are restricted from proceeding to the congested portion of Hutchison Drive near the temporary bookstore construction site.

### 3.5.2 Landscaping

The proposed project would include no landscaping at the site of the temporary bookstore. The project would include additional landscaping in Parking Lot 41 at the site of the turnaround area and visitor information area.

### 3.5.3 Parking and Roadways

As described above the proposed project would include parking lot modification with the removal of the Silo parking lot from use and the modifications to Parking Lot 41 at Kleiber Hall Drive.

The planned roadway changes for the project include relocation of the campus entry gate, removal of parking on Bioletti Drive (10 spaces south of Hutchison), conversion of the Bioletti Drive intersection to a roundabout, and improved crossings of Hutchison for pedestrians and wheelchair users.

### 3.5.4 Utilities and Infrastructure

As discussed below and analyzed in Section 7.16, the proposed project would require connections to campus utilities and infrastructure including domestic water, sanitary sewer, electricity, and natural gas. These connections are within the project site at the Silo parking lot and would not require off-site trenching or upgrades to service capacity. The connections would not increase use of campus utilities because the project is simply temporarily replacing the existing bookstore operation while the main bookstore is renovated.
3.5.5 Sustainable Design Elements

Due to the temporary nature of the structure, the proposed project is not subject to the UC Policy on Sustainable Practices.

3.5.6 Population

The proposed project would not increase the campus population. Employees at the temporary bookstore are existing employees who would be relocated as part of the temporary relocation from the Memorial Union bookstore.

3.6 Construction Schedule and Staging

Construction of the proposed project is anticipated to begin in Winter of 2011 and end in Fall of 2011. Construction staging would occur within the project boundaries and contractor parking associated with the proposed project would in nearby campus parking lots with excess capacity. Prior to the start of construction on the temporary bookstore, an interim access gate on Hutchison Drive would be installed.
4 CONSISTENCY WITH THE 2003 LRDP AND 2003 LRDP EIR

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

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

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

4.1 2003 LRDP SCOPE OF DEVELOPMENT

The proposed project contributes to the renovation of the main campus bookstore by providing a temporary relocation space. The 2003 LRDP identified that improved use of existing campus buildings to provide additional space and maximize the use of major activity centers would support the overall growth and development at UC Davis.

4.2 2003 LRDP LAND USE DESIGNATION

The proposed project within the Silo parking lot is consistent with the 2003 LRDP designation of Academic and Administrative—High Density. Although the proposed use is temporary, the site would be available for a long-term project that may eventually occupy the site.

4.3 2003 LRDP POPULATION PROJECTIONS

The proposed project would not increase the campus population. The campus is currently below the population projections contained in the 2003 LRDP and evaluated in the 2003 LRDP EIR and as documented in the Memorial Union Bookstore Renovation and Expansion Project Initial Study, the proposed expansion of the campus bookstore would not exceed the population projections in the 2003 LRDP EIR (UC Davis 2010).

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.

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.
5 ENVIRONMENTAL RESOURCES POTENTIALLY AFFECTED

The environmental resources, 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.

☐ Aesthetics  ☐ Agricultural Resources  ☐ Air Quality

☐ Biological Resources  ☐ Cultural Resources  ☐ Geology, Soils & Seismicity

☐ Hazards & Hazardous Materials  ☐ Hydrology & Water Quality  ☐ Land Use & Planning

☐ Mineral Resources  ☐ Noise  ☐ Population & Housing

☐ Public Services  ☐ Recreation  ☐ Transportation, Circulation & Parking

☐ Utilities/Service Systems  ☐ Mandatory Findings of Significance

As indicated in the checklist above and based on the analysis presented in this 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 adequately addressed by the 2003 LRDP EIR. This Initial Study has concluded that the project would incrementally contribute to, but would not exceed, certain significant cumulative 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 have been identified to further reduce the impact. The proposed project would required no project-specific impacts and completion of a Negative Declaration would be appropriate. The draft Negative Declaration is included in Appendix A.
6 DETERMINATION

On the basis of this initial evaluation:

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

☐ The proposed project COULD have a significant effect on the environment, the project impacts were adequately addressed in an earlier document or there will not be a significant effect in this case because revisions in the project have been made that will avoid or reduce any potential significant effect to a less-than-significant level. A MITIGATED NEGATIVE DECLARATION will be prepared.

☐ 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.

__________________________________________  _______________
Sid England        Date
Assistant Vice Chancellor – Environmental Stewardship and Sustainability
7 EVALUATION OF ENVIRONMENTAL IMPACTS

Introduction

The University has defined the column headings in the Initial Study as follows:

- **Potentially Significant Impact:** This column is checked if there is substantial evidence that the project’s effect may be significant. If the project may result in one or more Potentially Significant Impacts, an EIR is required.

- **Less than Significant with Project-level Mitigation Incorporated:** This column is checked where incorporation of project-specific mitigation measures will reduce an effect from “Potentially Significant Impact” to “Less than Significant Impact.” All project-level mitigation measures must be described, including a brief explanation of how the measures reduce the effect to a less than significant level.

- **Project Impact Addressed in the 2003 LRDP EIR:** This column is checked where the potential impacts of the proposed project were adequately addressed in the 2003 LRDP EIR and mitigation measures identified in the LRDP EIR will mitigate any impacts of the proposed project to the extent feasible. All applicable LRDP EIR mitigation measures are incorporated into the project as proposed. The impact analysis in this document summarizes and cross references (including section/page numbers) the relevant analysis in the LRDP EIR.

- **Less than Significant Impact:** This column is checked when the project will not result in any significant effects. The effects may or may not have been discussed in the LRDP EIR. The project impact is less-than-significant without incorporation of LRDP or project-level mitigation.

- **No Impact:** This column is checked when a project would not result in any impact in the category or the category does not apply. “No impact” answers need to be adequately supported by the information sources cited or should note that the impact does not apply to projects like the one involved (e.g., the project outside a fault rupture zone). A “No Impact” answer should be explained where it is based on project-specific factors as well as general standards (e.g., the project will not expose sensitive receptors to pollutants, based on project specific screening analysis.)
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 Campus Planning, Design and Construction Management, 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 areas are a core campus parking lot of approximately two acres with buildings to the east and west and the UC Davis Hutchison Drive roadway and parking lot 41 near Kleiber Hall Drive. North of the site is Hutchison Drive, a major campus two-lane roadway with high volumes of pedestrians, cyclists, service vehicles, and transit vehicles. South of the site is a landscaped area with a sidewalk and bike path. The site is prominent within the campus core and is visible from multiple directions at vantage points that range from being very close (the adjacent sidewalk) to mid-range distances of approximately 100 yards.
The existing parking lot areas are unremarkable in terms of visual quality with no exceptionally negative or positive aesthetic features to attract interest from campus users. The sites are not visible from locations off-campus and the sites are not part of a long-range view. The existing parking lots and roadway include nighttime lighting for the purpose of illuminating the parking lots.

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. The proposed project is within the scope of analysis in the 2003 LRDP EIR and 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

<table>
<thead>
<tr>
<th>AESTHETICS</th>
<th>Potentially Significant Impact</th>
<th>Less than Significant with Project-level Mitigation</th>
<th>Impact adequately addressed in 2003 LRDP EIR</th>
<th>Less than Significant Impact</th>
<th>No Impact</th>
</tr>
</thead>
<tbody>
<tr>
<td>Would the project…</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>a) Have a substantial adverse effect on a scenic vista?</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>✓</td>
</tr>
<tr>
<td>b) Substantially damage scenic resources, including, but not limited to,</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>✓</td>
</tr>
<tr>
<td>trees, rock outcroppings, and historic buildings within a state scenic</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>highway?</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>c) Substantially degrade the existing visual character or quality of the</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>✓</td>
</tr>
<tr>
<td>site and its surroundings?</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>d) Create a new source of substantial light or glare which would</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>✓</td>
</tr>
<tr>
<td>adversely affect day or nighttime views in the area?</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

a) The 2003 LRDP EIR defined a scenic vista as an expansive view of a highly valued landscape from a publicly accessible viewpoint, and identified the only scenic vista on the UC Davis campus to be the view west across agricultural land to the Coast Range. On and near campus, viewpoints along SR 113, Hutchison Drive, La Rue Road, and Russell Boulevard provide scenic vistas to the west across agricultural land to the Coast Range. The proposed project would have no effect on scenic vistas because the project is within the highly developed portion of the core campus and views toward the Coast Range of mountains are blocked by buildings and landscaping. No impact would occur.

b,c) The campus is not located near a state scenic highway. 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 valued elements of the UC Davis visual landscape because the site is already developed as a campus parking lot and the proposed building construction would not disturb views of historic buildings. The adjacent Silo food complex includes a shingle-sided building and is part of the early years of campus development. The primary visual features of this Silo building are visible from east, north, and south and these views are not visible from the project site. The proposed project would match the scale of adjacent buildings in terms of height and overall size. The proposed project would have no effect on the valued visual elements of the Silo building. No impact would occur.

d) The proposed project would result in decreased exterior illumination and glare than the existing condition because the majority of exterior lights from the existing parking lot would be removed. No impact would occur.

Summary

The project will have no impact to aesthetic resources. No LRDP EIR Mitigation Measures or project-specific mitigation measures related to aesthetic resources are required.
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 is within the highly-developed portion of the UC Davis core campus and is not adjacent to any agricultural resources.

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. The proposed project is within the scope of analysis in the 2003
LRDP EIR and no significant impacts identified in the 2003 LRDP EIR related to aesthetics are relevant to the proposed project.

### 7.2.4 Environmental Checklist and Discussion

#### AGRICULTURAL RESOURCES

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

a) The project is a developed parking lot and is identified in FMMP as Urban and Built-Up land. The project would convert no farmland to non-agricultural use. No impact would occur.

b) Campus lands are state lands and are not eligible for Williamson Act agreements, nor are they subject to local zoning controls. Therefore, the proposed project would not conflict with existing zoning for agricultural use or a Williamson Act contract, and no impact would occur.

c) The project has no relationship to agricultural land and would not affect the agricultural research activities taking place at other UC Davis locations. No impact would occur.

**Summary**

The project will have no impact to agricultural resources. No LRDP EIR Mitigation Measures or project-specific mitigation measures related to agricultural resources are required.
7.3 **AIR QUALITY**

7.3.1 **Background**

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

**Campus**

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

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

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

Air quality on campus on any given day is influenced by both meteorological conditions and pollutant emissions. In general, meteorological conditions vary more than pollutant emissions from day to day, and tend to have a greater influence on changes in measured ambient pollutant concentrations. Ambient concentrations of CO and PM₁₀, however are particularly influenced by local emission sources. The EPA has classified the entire SVAB, which includes the campus, as a serious nonattainment area for O₃. Districts in the SVAB have requested a voluntary bump-up designation to “severe,” which would result in an attainment deadline of 2018. The EPA approval of the voluntary bump-up is still pending. The CARB has also designated the area as being in nonattainment under the state ambient air quality standards for O₃ and PM₁₀. The designation of an area as attainment or nonattainment is based on monitored data throughout the SVAB.

**Project Site**

The proposed project includes existing campus parking lots and sections of roadway. The sites and the uses surrounding site are not sensitive air quality receptors.
7.3.2 2003 LRDP EIR Standards of Significance

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

Criteria Pollutants

- Conflict with or obstruct implementation of the applicable air quality plan.
- Violate any air quality standard or contribute substantially to an existing or projected air quality violation. (According to the YSAQMD, emissions of NO\textsubscript{x}, and ROG in excess of 10 tons per year, PM\textsubscript{10} emissions of 80 pounds a day, or CO emissions violating a state ambient air standard for CO 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 identified to reduce the magnitude of project-level impact 4.3-3, but this impact is identified as significant and unavoidable due to uncertainty about the effectiveness of the mitigation.

<table>
<thead>
<tr>
<th>2003 LRDP EIR Impacts</th>
<th>Level of Significance Prior to Mitigation</th>
<th>Level of Significance After Mitigation</th>
</tr>
</thead>
<tbody>
<tr>
<td>AIR QUALITY</td>
<td></td>
<td></td>
</tr>
<tr>
<td>4.3-3 Emissions from construction activities associated with the 2003 LRDP would exceed YSAQMD thresholds.</td>
<td>S</td>
<td>SU</td>
</tr>
</tbody>
</table>

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

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

**2003 LRDP EIR Mitigation Measures**  
**AIR QUALITY**

<table>
<thead>
<tr>
<th>4.3-3(a)</th>
<th>The campus shall include in all construction contracts the measures specified below to reduce fugitive dust impacts, including but not limited to the following:</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>• All disturbed areas, including storage piles, which are not being actively utilized for construction purpose, shall be effectively stabilized of dust emissions using water, chemical stabilizer/suppressant, or vegetative ground cover.</td>
</tr>
<tr>
<td></td>
<td>• All on-site unpaved roads and off-site unpaved access roads shall be effectively stabilized of dust emissions using water or chemical stabilizer/suppressant.</td>
</tr>
<tr>
<td></td>
<td>• All land clearing, grubbing, scraping, excavation, land leveling, grading, cut and fill, and demolition activities shall be effectively controlled of fugitive dust emissions utilizing application of water or by presoaking.</td>
</tr>
<tr>
<td></td>
<td>• When demolishing buildings up to six stories in height, all exterior surfaces of the building shall be wetted during demolition.</td>
</tr>
<tr>
<td></td>
<td>• When materials are transported off-site, all material shall be covered, effectively wetted to limit visible dust emissions, or at least two feet of freeboard space from the top of the container shall be maintained.</td>
</tr>
<tr>
<td></td>
<td>• All operations shall limit or expeditiously remove the accumulation of mud or dirt from adjacent public streets at least once every 24 hours when operations are occurring. The use of dry rotary brushes is expressly prohibited except where preceded or accompanied by sufficient wetting to limit the visible dust emissions. Use of blower devices also is expressly forbidden.</td>
</tr>
<tr>
<td></td>
<td>• Following the addition of materials to, or the removal of materials from, the surface of outdoor storage piles, said piles shall be effectively stabilized of fugitive dust emissions by utilizing sufficient water or chemical stabilizer/suppressant.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>4.3-3(c)</th>
<th>The campus shall implement the following control measures to reduce emissions of ozone precursors from construction equipment exhaust:</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>• To the extent that equipment is available and cost effective, the campus shall encourage contractors to use alternate fuels and retrofit existing engines in construction equipment.</td>
</tr>
<tr>
<td></td>
<td>• Minimize idling time to a maximum of 5 minutes when construction equipment is not in use.</td>
</tr>
<tr>
<td></td>
<td>• To the extent practicable, manage operation of heavy-duty equipment to reduce emissions.</td>
</tr>
<tr>
<td></td>
<td>• To the extent practicable, employ construction management techniques such as timing construction to occur outside the ozone season of May through October, or scheduling equipment use to limit unnecessary concurrent operation.</td>
</tr>
</tbody>
</table>
7.3.4 Environmental Checklist and Discussion

<table>
<thead>
<tr>
<th>AIR QUALITY</th>
<th>Potentially Significant Impact</th>
<th>Less than Significant with Project-level Mitigation</th>
<th>Impact adequately addressed in 2003 LRDP EIR</th>
<th>Less than Significant Impact</th>
<th>No Impact</th>
</tr>
</thead>
<tbody>
<tr>
<td>Would the project…</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>a) Conflict with or obstruct implementation of the applicable air quality plan?</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☑</td>
<td>☐</td>
</tr>
<tr>
<td>b) Violate any air quality standard or contribute substantially to an existing or projected air quality violation?</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☑</td>
<td>☐</td>
</tr>
<tr>
<td>c) Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is in non-attainment under an applicable federal or state ambient air quality standard (including releasing emissions which exceed quantitative thresholds for ozone precursors)?</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☑</td>
<td>☐</td>
</tr>
<tr>
<td>d) Expose sensitive receptors to substantial pollutant concentrations?</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☑</td>
<td>☐</td>
</tr>
<tr>
<td>e) Create objectionable odors affecting a substantial number of people?</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☑</td>
</tr>
</tbody>
</table>

a,b,c,d) Construction

The 2003 LRDP EIR found that construction activities under the 2003 LRDP could exceed YSAQMD thresholds (Impact 4.3-3). The state 24-hour PM$_{10}$ standards could be violated when multiple construction projects (especially those involving ongoing grading or excavation activities) occur simultaneously in the same area. Housing or other sensitive receptors located adjacent to construction areas could be affected by high concentrations of PM$_{10}$. In addition, exhaust pollutants would be emitted during use of construction equipment.

The proposed project would include removal of existing asphalt in the parking lot, construction of new foundation for the temporary building, and installation of the pre-fabricated temporary building. While the proposed project would be a relatively small construction effort, it would contribute to construction-related air emissions from the use of construction equipment and potential dust generation during asphalt removal.

LRDP Mitigation 4.3-3(a) (requiring campus construction contracts to include measures to reduce fugitive dust impacts) and 4.4-3(c) (requiring control measures to reduce emissions of ozone precursors from construction equipment exhaust) are relevant in the proposed project. However, the proposed project would involve the short-term emission of exhaust pollutants from construction equipment and from trucks moving the bookstore inventory to the temporary location.

The 2003 LRDP EIR found that the impact of the cumulative emissions from the totality of projects under construction at any given time under the 2003 LRDP would be significant and unavoidable. The impact was adequately analyzed in the 2003 LRDP EIR and was fully addressed in the Findings and Statement of Overriding Considerations adopted by The Regents in connection with its approval of the 2003 LRDP, and no new project-level mitigation measures have been identified that would further reduce the impact.
Operation

Operation of the proposed project would be similar to the operation of the existing bookstore building. During operation of the temporary bookstore building, the existing building would not be open. No additional emissions beyond the emissions currently being produced from the existing main bookstore are expected from the temporary bookstore. Therefore, there would be no significant change to emissions, and no impact would occur.

e) The proposed project would not generate objectionable odors. No impact would occur.

Summary

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 impacts that were not previously addressed. Mitigation measures 4.3-3 (a,c) from the 2003 LRDP EIR are relevant to the proposed project and reduce the significance of air quality impacts to the extent feasible. No new mitigation measures were identified that would further reduce the impacts of the project.
7.4 BIOLOGICAL RESOURCES

7.4.1 Background

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

Campus

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

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

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

Project Site

The project site is a parking lot within the highly-developed portion of the UC Davis core campus.

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.

**Trees**

The proposed project will remove 24 trees within the existing parking lot. The trees to remove are Chinese hackberry’s, a common landscaping tree at UC Davis. The trees proposed for removal are of medium height (approximately 20 to 25 feet) and in average condition.

**7.4.2 2003 LRDP EIR Standards of Significance**

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

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

• Conflict with any applicable local policies protecting biological resources such as a tree protection policy or ordinance.

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

7.4.3 2003 LRDP EIR Impacts and Mitigation Measures

Impacts of campus growth under the 2003 LRDP through 2015-16 on biological resources are evaluated in Section 4.4 of the 2003 LRDP EIR. The proposed project is within the scope of analysis in the 2003 LRDP EIR and the 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.

<table>
<thead>
<tr>
<th>2003 LRDP EIR Impacts</th>
<th>Level of Significance Prior to Mitigation</th>
<th>Level of Significance After Mitigation</th>
</tr>
</thead>
<tbody>
<tr>
<td>4.4-4 Development allowed under the 2003 LRDP could result in the failure of nesting efforts by nesting raptors, including Swainson’s hawks or other birds of prey.</td>
<td>PS</td>
<td>LS</td>
</tr>
<tr>
<td>4.4-5 Development allowed under the 2003 LRDP would result in the loss of active nest sites for Swainson’s hawk.</td>
<td>PS</td>
<td>LS</td>
</tr>
</tbody>
</table>

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

Mitigation measures in the 2003 LRDP EIR that are applicable to the proposed project are presented below. Since these mitigation measures are already being carried out as part of implementation of the 2003 LRDP, they are considered part of the project description and will not be readopted in this Initial Study or Negative Declaration. Nothing in this Initial Study in any way alters the obligations of the campus to implement 2003 LRDP EIR mitigation measures.

<table>
<thead>
<tr>
<th>2003 LRDP EIR Mitigation Measures</th>
<th>BIOLOGICAL RESOURCES</th>
</tr>
</thead>
<tbody>
<tr>
<td>4.4-4(a) The campus shall conduct a pre-construction survey of trees on and adjacent to a project site during the raptor breeding season (approximately March 1 to August 31). Additionally, the campus shall conduct surveys within a ½-mile radius of the site to determine the presence or absence of any nesting Swainson’s hawks. The surveys shall be conducted by a qualified biologist during the same calendar year that the proposed activity is planned to begin to determine if any nesting birds-of-prey would be affected. If phased construction procedures are planned for the proposed activity, the results of the above survey shall be valid only for the season when it is conducted. If any Swainson’s hawks are nesting within a one-half-mile radius of the project site or if other raptors are nesting in, on or adjacent to the project site, a qualified biologist shall determine the potential for disturbance to nesting raptors, including Swainson’s hawks. If the biologist determines that there is a significant potential for disturbance, the campus shall implement feasible changes in the construction schedule or make other appropriate adjustments to the project in response to the specific circumstances. If feasible project changes are not readily identifiable, the campus will consult with CDFG to determine what actions should be taken to protect the nesting</td>
<td></td>
</tr>
</tbody>
</table>
2003 LRDP EIR Mitigation Measures

BIOLOGICAL RESOURCES

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.

4.4-5 Mitigation 4.4-4(a) and (b) will be implemented, including pre-construction survey of trees on and adjacent to a project site during the raptor breeding season (approximately March 1 to August 31). If a Swainson’s hawk nest tree is present, the tree will be removed outside the nesting season (March-May).

---

7.4.4 Environmental Checklist and Discussion

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

☐ ☐ ☐ ☐ ☐ ☑

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

☐ ☐ ☐ ☐ ☐ ☑

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

☐ ☐ ☐ ☐ ☑ ☐

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

☐ ☐ ☐ ☐ ☐ ☑

a) Plants

The proposed project would have no effect on sensitive plant species. See item (c) below for details related to removal of urban landscaping trees.

Wildlife

The 2003 LRDP EIR found that development under the 2003 LRDP could result in the loss of special-status plant species (LRDP Impact 4.4-1), and could affect several wildlife species, including the burrowing owl, Swainson’s hawk, the valley elderberry longhorn beetle, the western pond turtle, and special-status fish species (LRDP Impacts 4.4-2 through 4.4-7 and 4.4-12 through 4.4-14). Under the proposed project, construction would be limited to a previously developed site within the core campus. The proposed project would redevelop fully developed parking lot and roadway areas that are surrounded by buildings, walkways, bicycle parking, and limited horticultural landscaping.

Swainson’s hawks could possibly nest in trees on or adjacent to the site. Since the early 1990s, Swainson’s hawks have not nested in any trees on the site. However, it is possible they could nest in the area before construction starts. Implementation of LRDP Mitigation Measures 4.4-4(a)-(b) and 4.4-5 requires actions to ensure that active nests are not disturbed. Since the early 1990’s several Swainson’s hawks have nested within ½-mile of the project site. All except one nesting attempt have been over ¼-mile from the site, screened from the project site by buildings and/or vegetation, and in areas where nesting birds have habituated to high levels of human activity. In 2001, a pair of Swainson’s hawks nested approximately 200 feet west of the project site in a pine tree within the courtyard of the Surge Buildings. Implementation of LRDP Mitigation Measures 4.4-4(a)-(b) and 4.4-5 would reduce potential impacts to nesting Swainson’s Hawks to a less-than-significant level. The site does not provide suitable habitat for any special status plant or animal species. No additional impacts would occur to special status species.

b,c) The proposed project site is an existing campus parking lot with no connection to riparian or wetland areas. No impact would occur.
d) The Putah Creek corridor, which is the southern boundary of the campus, is the principal corridor for the movement of native resident and migratory fish and wildlife through the UC Davis campus. It is the regional connection between the hills in western Yolo County and the Sacramento River. The project is approximately 0.75 miles north of 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) Pursuant to LRDP Mitigation Measure 4.4-11, the campus performs a tree survey of a project site prior to project approval, and modifies the project design to the extent feasible to avoid tree removal or provide additional mitigation if removal of heritage or specimen trees cannot be avoided. The proposed project would not result in removal of heritage or specimen trees. The project would result in the removal of 30 trees. These trees are not highly rated and the potential impact would be less than significant.

f) The campus does not fall within the boundaries of, nor is it adjacent to, an adopted regional Habitat Conservation Plan (HCP) or Natural Community Conservation Plan (NCCP). The campus has implemented two low effects HCPs for Valley Elderberry Longhorn Beetle at Russell Ranch. The project is not located at Russell Ranch. Therefore, the proposed project would not conflict with an adopted HCP or NCCP.

Summary

The proposed project would not exceed the levels of significance of biological resources impacts previously addressed in the 2003 LRDP EIR, nor would it introduce any new significant impacts that were not previously addressed. Mitigation measures 4.4-4(a-b) from the 2003 LRDP EIR are relevant to the proposed project and reduce the significance of biological resources impacts to the extent feasible. No new mitigation measures were identified that would further reduce the impacts of the project.
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

The proposed project are core campus parking lots and roadways which contains no historic resources. The potential for intact buried archaeological resources is considered very low because the project site is approximately 0.75 miles from the Putah Creek Corridor and prior subsurface testing and monitoring for archaeological resources close to the project site have been negative.

7.5.2 2003 LRDP EIR Standards of Significance

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

Archaeological Resources

The 2003 LRDP EIR considers an impact on archaeological resources significant if growth under the 2003 LRDP would:
- Cause a substantial adverse change in the significance of a unique archaeological resource pursuant to CEQA Guideline § 15064.5.
- Disturb any human remains, including those interred outside of formal cemeteries.

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

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

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

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

**Historical Resources**

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

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

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

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

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

7.5.3 2003 LRDP EIR Impacts and Mitigation Measures

Impacts of campus growth under the 2003 LRDP through 2015-16 on agricultural resources are evaluated in Section 4.2 of the 2003 LRDP EIR. The proposed project is within the scope of analysis in the 2003 LRDP EIR and no significant impacts identified in the 2003 LRDP EIR related to aesthetics are relevant to the proposed project.

7.5.4 Environmental Checklist and Discussion

<table>
<thead>
<tr>
<th>CULTURAL RESOURCES</th>
<th>Potentially Significant Impact</th>
<th>Less than Significant with Project-level Mitigation</th>
<th>Impact adequately addressed in 2003 LRDP EIR</th>
<th>Less than Significant Impact</th>
<th>No Impact</th>
</tr>
</thead>
<tbody>
<tr>
<td>Would the project...</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>a) Cause a substantial adverse change in the significance of a historical resource as defined in Section 15064.5?</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☑</td>
</tr>
<tr>
<td>b) Cause a substantial adverse change in the significance of an archaeological resource pursuant to Section 15064.5?</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☑</td>
</tr>
<tr>
<td>c) Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☑</td>
</tr>
</tbody>
</table>
a) The project site is a core campus parking lot and contains no historic resources. No impact would occur.

b,d) Testing and monitoring for archaeological resources near the project site have indicated that this portion of the UC Davis campus is not expected to contain archaeological resources. In addition, the project site has been previously disturbed and the proposed construction will include shallow excavation within the depth of the previously prepared sub-base for the parking lot construction in the effort to prepare a building foundation that will be raised above the current parking lot elevation. Accordingly, the project would have no effect on intact archaeological resources and no potential to disturb buried human remains. 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.

Summary

The project will have no impact to cultural resources. No LRDP EIR Mitigation Measures or project-specific mitigation measures related to cultural resources are required.
7.6 GEOLGY, SOILS, & SEISMICITY

7.6.1 Background

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

Campus

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

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

Project Site

The project site is a parking lot within the highly-developed portion of the UC Davis core campus. The engineering and design process for the temporary building has incorporated the findings from the geotechnical survey to ensure adequate design for compliance with the California Building Code.

7.6.2 2003 LRDP EIR Standards of Significance

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

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

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

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

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

### 7.6.3 2003 LRDP EIR Impacts and Mitigation Measures

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

### 7.6.4 Environmental Checklist and Discussion

<table>
<thead>
<tr>
<th>GEOLOGY, SOILS, &amp; SEISMICITY</th>
<th>Potentially Significant Impact</th>
<th>Less than Significant with Project-level Mitigation</th>
<th>Impact adequately addressed in 2003 LRDP EIR</th>
<th>Less than Significant Impact</th>
<th>No Impact</th>
</tr>
</thead>
<tbody>
<tr>
<td>Would the project…</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>a) Expose people or structures to potential substantial adverse effects, including the risk of loss, injury, or death involving:</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>i) Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault? Refer to Division of Mines and Geology Special Publication 42.</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☑</td>
</tr>
<tr>
<td>ii) Strong seismic ground shaking?</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☑</td>
</tr>
<tr>
<td>iii) Seismic-related ground failure, including liquefaction?</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☑</td>
</tr>
<tr>
<td>iv) Landslides?</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☑</td>
</tr>
<tr>
<td>b) Result in substantial soil erosion or the loss of topsoil?</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☑</td>
</tr>
<tr>
<td>c) Be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction or collapse?</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☑</td>
</tr>
<tr>
<td>d) Be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994), creating substantial risks to life or property?</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☑</td>
</tr>
</tbody>
</table>
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. The proposed project would provide relocation space for the campus bookstore which is an existing campus operation that is already operating. The change from one the existing location to the temporary location would involve a new building that would be as seismically safe or safer than the existing building. Accordingly, the project is not expected to increase the exposure of people to hazards from seismic shaking. No impact would occur.

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

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

b) The soil types that occur on the UC Davis campus generally, including the project site, contain a high amount of silt and clay, and these soil types have minimal erosion hazard associated with them (see pages 4.6-1,2 and Figure 4.6-1 of the 2003 LRDP EIR). Therefore, for new construction sites, this impact was determined to be less than significant in the 2003 LRDP EIR. For the proposed project, which would occur on a previously developed parcel with minor excavation and surrounded by asphalt, the project is not expected to increase erosion. No impact would occur. The relationship between receiving water quality and potential soil erosion as a result of construction activities is addressed in items (a) and (c) in Section 7.8 Hydrology & Water Quality.

c) The potential for liquefaction on the campus is generally low because the depth to groundwater is relatively large (30 to 80 feet, depending on the season). Furthermore, as discussed above for (a,ii),
campus policy requires compliance with the CBC and the University of California Seismic Safety Policy, which include structural and nonstructural seismic safety provisions. Complying with the provisions of the CBC requires that a geotechnical investigation be performed to provide data for the architect and/or engineer to responsibly design the project. Geotechnical investigations address the potential for liquefaction, lateral spreading, and other types of ground failure. The foundation for the proposed single-story temporary building will include all required geotechnical design and safety considerations. At the project site, the existing parking lot has experienced no problems related to geologic instability and surrounding campus buildings have not experience such problems. These design considerations will ensure that the proposed project results in no increased risk. No impact would occur.

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. The initial geotechnical evaluations of the proposed site have indicated that the foundation and structural design for the proposed building can be accomplished using standard design and construction efforts. No impact would occur.

e) The proposed project would use no septic tanks or alternative wastewater disposal systems. No impact would occur.

Summary

The project will have no impact to geology, soils, and seismicity resources. No LRDP EIR Mitigation Measures or project-specific mitigation measures related to geology, soils, and seismicity resources are required.
7.7 **GREENHOUSE GAS EMISSIONS**

This section discusses the existing global, national, and statewide conditions related to greenhouse gases (GHG) and global climate change and evaluates the potential impacts on global climate from the implementation of the proposed project. The section also provides a brief discussion of the applicable federal, state, regional, and local agencies that regulate, monitor, and control GHG emissions.

The following sources were used to prepare this section of the Draft EIR:

- UC Davis 2003 Long Range Development Plan (2003 LRDP)
- YSAQMD’s Handbook for Assessing and Mitigating Air Quality Impacts
- The UC Davis 2009-2010 Climate Action Plan

7.7.1 **Environmental Setting**

**Background**

Global climate change refers to any significant change in climate measurements, such as temperature, precipitation, or wind, lasting for an extended period (i.e., decades or longer) (U.S. EPA 2008a). Climate change may result from:

- natural factors, such as changes in the sun’s intensity or slow changes in the Earth’s orbit around the sun;
- natural processes within the climate system (e.g., changes in ocean circulation, reduction in sunlight from the addition of GHG and other gases to the atmosphere from volcanic eruptions);
- and
- human activities that change the atmosphere’s composition (e.g., through burning fossil fuels) and the land surface (e.g., deforestation, reforestation, urbanization, desertification).

The primary change in global climate has been a rise in the average global tropospheric temperature of 0.2 degree Celsius per decade, determined from meteorological measurements worldwide between 1990 and 2005. Climate change modeling using 2000 emission rates shows that further warming is likely to occur, which would induce further changes in the global climate system during the current century (IPCC 2007). Changes to the global climate system and ecosystems, and to California, could include:

- declining sea ice and mountain snowpack levels, thereby increasing sea levels and sea surface evaporation rates with a corresponding increase in tropospheric water vapor due to the atmosphere’s ability to hold more water vapor at higher temperatures (IPCC 2007);
- rising average global sea levels primarily due to thermal expansion and the melting of glaciers, ice caps, and the Greenland and Antarctic ice sheets (model-based projections of global average sea level rise at the end of the 21st century (2090–2099) range from 0.18 meter to 0.59 meter or 0.59 foot to 1.94 feet) (IPCC 2007);
- changing weather patterns, including changes to precipitation, ocean salinity, and wind patterns, and more energetic aspects of extreme weather including droughts, heavy precipitation, heat waves, extreme cold, and the intensity of tropical cyclones (IPCC 2007);
- declining Sierra snowpack levels, which account for approximately half of the surface water storage in California, by 70 percent to as much as 90 percent over the next 100 years (Cal EPA 2006);
- increasing the number of days conducive to ozone formation by 25 to 85 percent (depending on the future temperature scenario) in high ozone areas located in the Southern California area and the San Joaquin Valley by the end of the 21st century (Cal EPA 2006);
increasing the potential for erosion of California’s coastlines and sea water intrusion into the Sacramento and San Joaquin Delta and associated levee systems due to the rise in sea level (California EPA 2006);
- increasing pest infestation, making California more susceptible to forest fires (Cal EPA 2006);
- increasing the demand for electricity by 1 to 3 percent by 2020 due to rising temperatures resulting in hundreds of millions of dollars in extra expenditures (Cal EPA 2006); and
- summer warming projections in the first 30 years of the 21st century ranging from about 0.5 to 2 degrees Celsius (°C) (0.9 to 3.6 °F) and by the last 30 years of the 21st century, from about 1.5 to 5.8 °C (2.7 to 10.5 °F) (Cal EPA 2006).

The natural process through which heat is retained in the troposphere1 is called the “greenhouse effect.” The greenhouse effect traps heat in the troposphere through a threefold process as follows: (1) short-wave radiation in the form of visible light emitted by the Sun is absorbed by the Earth as heat; (2) long-wave radiation is re-emitted by the Earth; and (3) GHGs in the upper atmosphere absorb or trap the long-wave radiation and re-emit it back towards the Earth and into space. This third process is the focus of current climate change actions.

While water vapor and carbon dioxide (CO2) are the most abundant GHGs, other trace GHGs have a greater ability to absorb and re-radiate long-wave radiation. To gauge the potency of GHGs, scientists have established a Global Warming Potential (GWP) for each GHG based on its ability to absorb and re-emit long-wave radiation over a specific time period. The GWP of a gas is determined using CO2 as the reference gas, which has a GWP of 1 over 100 years (IPCC 1996).2 For example, a gas with a GWP of 10 is 10 times more potent than CO2 over 100 years. The use of GWP allows GHG emissions to be reported using CO2 as a baseline. The sum of each GHG multiplied by its associated GWP is referred to as “carbon dioxide equivalents” (CO2e). This essentially means that 1 metric ton of a GHG with a GWP of 10 has the same climate change impacts as 10 metric tons of CO2.

**Greenhouse Gases**

State law defines GHGs to include the following compounds:

- **Carbon Dioxide (CO2).** Carbon dioxide primarily is generated by fossil fuel combustion from stationary and mobile sources. Due to the emergence of industrial facilities and mobile sources over the past 250 years, the concentration of carbon dioxide in the atmosphere has increased 35 percent (U.S. EPA 2008b). Carbon dioxide is the most widely emitted GHG and is the reference gas (GWP of 1) for determining the GWP of other GHGs. In 2004, 82.8 percent of California’s GHG emissions were carbon dioxide (California Energy Commission 2007).

- **Methane (CH4).** Methane is emitted from biogenic sources (i.e., resulting from the activity of living organisms), incomplete combustion in forest fires, landfills, manure management, and leaks in natural gas pipelines. In the United States, the top three sources of methane are landfills, natural gas systems, and enteric fermentation (U.S. EPA n.d.[a]). Methane is the primary component of natural gas, which is used for space and water heating, steam production, and power generation. The GWP of methane is 21.

- **Nitrous Oxide (N2O).** Nitrous oxide is produced by natural and human-related sources. Primary human-related sources include agricultural soil management, animal manure management, sewage

---

1 The troposphere is the bottom layer of the atmosphere, which varies in height from the Earth’s surface to 10 to 12 kilometers).

2 All Global Warming Potentials are given as 100-year values.
treatment, mobile and stationary combustion of fossil fuel, adipic acid production, and nitric acid production. The GWP of nitrous oxide is 310.

- **Hydrofluorocarbons (HFCs).** HFCs typically are used as refrigerants in both stationary refrigeration and mobile air conditioning. The use of HFCs for cooling and foam-blowing is growing particularly as the continued phase-out of chlorofluorocarbons (CFCs) and hydrochlorofluorocarbons (HCFCs) gains momentum. The GWP of HFCs ranges from 140 for HFC-152a to 6,300 for HFC-236fa.

- **Perfluorocarbons (PFCs).** Perfluorocarbons are compounds consisting of carbon and fluorine. They are primarily created as a byproduct of aluminum production and semiconductor manufacturing. Perfluorocarbons are potent GHGs with a GWP several thousand times that of carbon dioxide, depending on the specific PFC. Another area of concern regarding PFCs is their long atmospheric lifetime (up to 50,000 years) (Energy Information Administration 2007). The GWPs of PFCs range from 5,700 to 11,900.

- **Sulfur Hexafluoride (SF6).** Sulfur hexafluoride is a colorless, odorless, nontoxic, nonflammable gas. It is most commonly used as an electrical insulator in high voltage equipment that transmits and distributes electricity. Sulfur hexafluoride is the most potent GHG that has been evaluated by the Intergovernmental Panel on Climate Change with a GWP of 23,900. However, its global warming contribution is not as high as the GWP would indicate due to its low mixing ratio, as compared to carbon dioxide (4 parts per trillion [ppt] in 1990 versus 365 parts per million [ppm] of CO2) (U.S. EPA n.d.[b]).

**Contributions to Greenhouse Gas Emissions**

**Global**

Worldwide anthropogenic (man-made) GHG emissions are tracked for industrialized nations (referred to as Annex I) and developing nations (referred to as Non-Annex I). Man-made GHG emissions for Annex I nations are available through 2007. Man-made GHG emissions for Non-Annex I nations are available through 2005. The sum of these emissions totaled approximately 42,133 million metric tons of CO2 equivalents (MMTCO2E). It should be noted that global emissions inventory data are not all from the same year and may vary depending on the source of the emissions inventory data. The top five countries and the European Union accounted for approximately 55 percent of the total global GHG emissions according to the most recently available data (See Table 4.2-1, Top Five GHG Producer Countries and the European Union [Annual]). The GHG emissions in more recent years may differ from the inventories presented in Table 4.2-1; however, the data is representative of currently available global inventory data.

---

3 The CO2 equivalent emissions commonly are expressed as “million metric tons of carbon dioxide equivalent (MMTCO2E).” The carbon dioxide equivalent for a gas is derived by multiplying the tons of the gas by the associated GWP, such that MMTCO2E = (million metric tons of a GHG) x (GWP of the GHG).

Table 4.2-1
Top Five GHG Producer Countries and the European Union (Annual)

<table>
<thead>
<tr>
<th>Emitting Countries</th>
<th>GHG Emissions (MMTCO\textsubscript{2}e)</th>
</tr>
</thead>
<tbody>
<tr>
<td>China</td>
<td>7,250</td>
</tr>
<tr>
<td>United States</td>
<td>7,217</td>
</tr>
<tr>
<td>European Union (EU), 27 Member States</td>
<td>5,402</td>
</tr>
<tr>
<td>Russian Federation</td>
<td>2,202</td>
</tr>
<tr>
<td>India</td>
<td>1,863</td>
</tr>
<tr>
<td>Japan</td>
<td>1,412</td>
</tr>
<tr>
<td>Total</td>
<td>25,346</td>
</tr>
</tbody>
</table>

Excludes emissions and removals from land use, land-use change and forestry (LULUCF).
Note: Emissions for Annex I nations are based on 2007 data. Emissions for Non-Annex I nations (e.g., China, India) are based on 2005 data.

United States
As noted in Table 4.2-1, the United States was the number two producer of global GHG emissions as of 2005. The primary GHG emitted by human activities in the United States was CO\textsubscript{2}, representing approximately 84 percent of total GHG emissions (U.S. EPA 2008a). Carbon dioxide from fossil fuel combustion, the largest source of GHG emissions, accounted for approximately 80 percent of U.S. GHG emissions.\textsuperscript{5}

State of California
The California Air Resources Board compiles GHG inventories for the State of California. Based on the 2006 GHG inventory data (i.e., the latest year for which data are available) for the 2000–2006 GHG emissions inventory, California emitted 484 million metric tons of carbon dioxide equivalent (MMTCO\textsubscript{2}e) including emissions resulting from imported electrical power in 2006 (CARB 2009). Based on the CARB inventory data and GHG inventories compiled by the World Resources Institute, California’s total statewide GHG emissions rank second in the United States (Texas is number one) with emissions of 434 MMTCO\textsubscript{2}e excluding emissions related to imported power (CARB 2009).

A California Energy Commission (CEC) emissions inventory report placed CO\textsubscript{2} produced by fossil fuel combustion in California as the largest source of California’s GHG emissions in 2004, accounting for 80 percent of the total GHG emissions (California Energy Commission 2006a). Emissions of CO\textsubscript{2} from other sources contributed 3.1 percent of the total GHG emissions; methane emissions contributed 6.4 percent; nitrous oxide emissions contributed 7.6 percent; and the remaining 3.2 percent was composed of emissions of high-GWP gases (California Energy Commission 2006a). These high GWP gases are largely composed of refrigerants, with small contributions of SF\textsubscript{6} used in connection with insulating materials for electricity transmission and distribution.

The primary contributors to GHG emissions in California are transportation, electric power production from both in-state and out-of-state sources, industry, agriculture and forestry, and other sources, which include commercial and residential activities. Table 4.2-2, Annual GHG Emissions in California, provides

\textsuperscript{5} Supra no. 4.
a summary of GHG emissions reported in California in 1990 and 2006 separated by categories defined by
the United Nations Intergovernmental Panel on Climate Change (IPCC).

Between 1990 and 2008, the population of California grew by approximately 8.1 million (from 29.8 to
37.9 million) (U.S. Census Bureau 2009; California Department of Finance 2010). This represents an
increase of approximately 27.2 percent from 1990 population levels. In addition, the California economy,
measured as gross state product, grew from $788 billion in 1990 to $1.8 trillion in 2008 representing an
increase of approximately 128 percent (over twice the 1990 gross state product) (California Department
of Finance 2009). Despite the population and economic growth, California’s net GHG emissions only
grew by approximately 11 percent. The California Energy Commission (CEC) attributes the slow rate of
growth to the success of California’s renewable energy programs and its commitment to clean air and
clean energy (California Energy Commission 2006a).

Table 4.2-2
Annual GHG Emissions in California

<table>
<thead>
<tr>
<th>Source Category</th>
<th>1990 (MMTCO2e)</th>
<th>Percent of Total</th>
<th>2008 (MMTCO2e)</th>
<th>Percent of Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>ENERGY</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Energy Industries</td>
<td>386.41</td>
<td>89.2%</td>
<td>413.80</td>
<td>86.6%</td>
</tr>
<tr>
<td>Manufacturing Industries &amp; Construction</td>
<td>157.33</td>
<td>36.3%</td>
<td>171.23</td>
<td>35.8%</td>
</tr>
<tr>
<td>Transport</td>
<td>24.24</td>
<td>5.6%</td>
<td>16.67</td>
<td>3.5%</td>
</tr>
<tr>
<td>Other (Residential/Commercial/Institutional)</td>
<td>48.19</td>
<td>11.1%</td>
<td>46.59</td>
<td>9.8%</td>
</tr>
<tr>
<td>Non-Specified</td>
<td>1.38</td>
<td>0.3%</td>
<td>0.00</td>
<td>0.0%</td>
</tr>
<tr>
<td>Fugitive Emissions from Oil &amp; Natural Gas</td>
<td>2.94</td>
<td>0.7%</td>
<td>3.28</td>
<td>0.7%</td>
</tr>
<tr>
<td>Fugitive Emissions from Other Energy Production</td>
<td>2.31</td>
<td>0.5%</td>
<td>2.09</td>
<td>0.4%</td>
</tr>
<tr>
<td>INDUSTRIAL PROCESSES &amp; PRODUCT USE</td>
<td>18.34</td>
<td>4.2%</td>
<td>30.11</td>
<td>6.3%</td>
</tr>
<tr>
<td>Mineral Industry</td>
<td>4.85</td>
<td>1.1%</td>
<td>5.35</td>
<td>1.1%</td>
</tr>
<tr>
<td>Chemical Industry</td>
<td>2.34</td>
<td>0.5%</td>
<td>0.06</td>
<td>0.0%</td>
</tr>
<tr>
<td>Non-Energy Products from Fuels &amp; Solvent Use</td>
<td>2.29</td>
<td>0.5%</td>
<td>1.97</td>
<td>0.4%</td>
</tr>
<tr>
<td>Electronics Industry</td>
<td>0.59</td>
<td>0.1%</td>
<td>0.80</td>
<td>0.2%</td>
</tr>
<tr>
<td>Substitutes for Ozone Depleting Substances</td>
<td>0.04</td>
<td>0.0%</td>
<td>13.89</td>
<td>2.9%</td>
</tr>
<tr>
<td>Other Product Manufacture and Use</td>
<td>3.18</td>
<td>0.7%</td>
<td>1.66</td>
<td>0.3%</td>
</tr>
<tr>
<td>Other</td>
<td>5.05</td>
<td>1.2%</td>
<td>6.39</td>
<td>1.3%</td>
</tr>
<tr>
<td>AGRICULTURE, FORESTRY, &amp; OTHER LAND USE</td>
<td>19.11</td>
<td>4.4%</td>
<td>24.42</td>
<td>5.1%</td>
</tr>
<tr>
<td>Livestock</td>
<td>11.67</td>
<td>2.7%</td>
<td>16.28</td>
<td>3.4%</td>
</tr>
<tr>
<td>Land</td>
<td>0.19</td>
<td>0.0%</td>
<td>0.19</td>
<td>0.0%</td>
</tr>
<tr>
<td>Aggregate Sources &amp; Non-CO2 Sources on Land</td>
<td>7.26</td>
<td>1.7%</td>
<td>7.95</td>
<td>1.7%</td>
</tr>
<tr>
<td>WASTE</td>
<td>9.42</td>
<td>2.2%</td>
<td>9.41</td>
<td>2.0%</td>
</tr>
<tr>
<td>Solid Waste Disposal</td>
<td>6.26</td>
<td>1.4%</td>
<td>6.71</td>
<td>1.4%</td>
</tr>
<tr>
<td>Wastewater Treatment &amp; Discharge</td>
<td>3.17</td>
<td>0.7%</td>
<td>2.70</td>
<td>0.6%</td>
</tr>
</tbody>
</table>

EMISSIONS SUMMARY

| Gross California Emissions              | 433.29         |                  | 477.74         |                  |
| Sinks from Forests and Rangelands      | -6.69          |                  | -3.98          |                  |
7.7.2 Regulatory Considerations

Intergovernmental Panel on Climate Change

The World Meteorological Organization (WMO) and United Nations Environmental Program (UNEP) established the IPCC in 1988. The goal of the IPCC is to evaluate the risk of climate change caused by human activities. Rather than performing research or monitoring climate, the IPCC relies on peer-reviewed and published scientific literature to make its assessment. While not a regulatory body, the IPCC assesses information (i.e., scientific literature) regarding human-induced climate change and the impacts of human-induced climate change, and recommends options to policy makers for the adaptation and mitigation of climate change. The IPCC reports its evaluations in special reports called “assessment reports.” The latest assessment report (i.e., Fourth Assessment Report, consisting of three working group reports and a synthesis report based on the first three reports) was published in 2007.6 In its 2007 report, the IPCC stated that global temperature increases since the mid-20th century were “very likely” attributable to man-made activities (greater than 90 percent certainty) (IPCC 2007).

Federal

In Massachusetts vs. EPA, the Supreme Court held that United States Environmental Protection Agency (U.S. EPA) has the statutory authority under Section 202 of the Clean Air Act (CAA) to regulate GHGs from new motor vehicles. The court did not hold that the U.S. EPA was required to regulate GHG emissions; however, it indicated that the agency must decide whether GHGs from motor vehicles cause or contribute to air pollution that is reasonably anticipated to endanger public health or welfare. Upon the final decision, the President signed Executive Order 13432 on May 14, 2007, directing the U.S. EPA, along with the Departments of Transportation, Energy, and Agriculture, to initiate a regulatory process that responds to the Supreme Court’s decision.

In December 2007, the President signed the Energy Independence and Security Act of 2007, which sets a mandatory Renewable Fuel Standard (RFS) requiring fuel producers to use at least 36 billion gallons of biofuel in 2022 and sets a national fuel economy standard of 35 miles per gallon by 2020. The act also contains provisions for energy efficiency in lighting and appliances and for the implementation of green building technologies in federal buildings. On July 11, 2008, the U.S. EPA issued an Advanced Notice of Proposed Rulemaking (ANPRM) on regulating GHGs under the CAA. The ANPRM reviews the various CAA provisions that may be applicable to the regulation of GHGs and presents potential regulatory approaches and technologies for reducing GHG emissions. On April 10, 2009, the U.S. EPA published the Proposed Mandatory Greenhouse Gas Reporting Rule in the Federal Register (U.S. EPA 2009). The rule was adopted on September 22, 2009 and covers approximately 10,000 facilities nationwide, accounting for 85 percent of U.S. GHG emissions.

Sources:

The IPCC’s Fourth Assessment Report is available online at http://www.ipcc.ch/.
On September 15, 2009, the U.S. EPA and the Department of Transportation’s (DOT) National Highway Traffic Safety Administration (NHTSA) issued a joint proposal to establish a national program consisting of new standards for model year 2012 through 2016 light-duty vehicles that will reduce GHG emissions and improve fuel economy. The proposed standards would be phased in and would require passenger cars and light-duty trucks to comply with a declining emissions standard. In 2012, passenger cars and light-duty trucks would have to meet an average standard of 295 grams of CO2 per mile and 30.1 miles per gallon. By 2016, the vehicles would have to meet an average standard of 250 grams of CO2 per mile and 35.5 miles per gallon. These standards were formally adopted by the U.S. EPA and DOT on April 1, 2010.

On December 7, 2009, the U.S. EPA Administrator signed two distinct findings regarding GHGs under section 202(a) of the Clean Air Act:

- **Endangerment Finding:** The Administrator finds that the current and projected concentrations of the six key well-mixed GHGs (carbon dioxide, methane, nitrous oxide, hydrofluorocarbons, perfluorocarbons, and sulfur hexafluoride) in the atmosphere threaten the public health and welfare of current and future generations.

- **Cause or Contribute Finding:** The Administrator finds that the combined emissions of these well-mixed greenhouse gases from new motor vehicles and new motor vehicle engines contribute to the greenhouse gas pollution which threatens public health and welfare.

While these findings do not impose additional requirements on industry or other entities, this action was a prerequisite to finalizing the U.S. EPA’s proposed GHG emissions standards for light-duty vehicles, which were jointly proposed by the U.S. EPA and DOT.

**State**

Key state laws and regulations related to GHG emissions are described below. Additional assembly bills as well as non-regulatory advisory activities are summarized in Appendix C.

**Executive Order S-3-05 and the Climate Action Team**

In June 2005, Governor Schwarzenegger established California’s GHG emissions reduction targets in Executive Order S-3-05. The Executive Order established the following goals: GHG emissions should be reduced to 2000 levels by 2010, 1990 levels by 2020, and 80 percent below 1990 levels by 2050. The Secretary of Cal EPA is required to coordinate efforts of various agencies in order to collectively and efficiently reduce GHGs. Some of the agency representatives involved in the GHG reduction plan include the Secretary of the Business, Transportation and Housing Agency, the Secretary of the Department of Food and Agriculture, the Secretary of the Resources Agency, the Chairperson of CARB, the Chairperson of the CEC, and the President of the Public Utilities Commission.

Representatives from each of the aforementioned agencies comprise the Climate Action Team. The Cal/EPA secretary is required to submit a biannual progress report from the Climate Action Team to the governor and state legislature disclosing the progress made toward GHG emission reduction targets. In addition, another biannual report must be submitted illustrating the impacts of global warming on California’s water supply, public health, agriculture, coastline, and forests, and reporting possible mitigation and adaptation plans to combat these impacts. The Climate Action Team has fulfilled both of these report requirements through its March 2006 Climate Action Team Report to Governor Schwarzenegger and the Legislature (2006 CAT Report) (Cal EPA 2006). Some strategies currently being

---

7 The CO2 emission standards and fuel economy standards stated are based on U.S. EPA formulas.
implemented by state agencies include CARB introducing vehicle climate change standards and diesel anti-idling measures, the Energy Commission implementing building and appliance efficiency standards, and the Cal/EPA implementing their green building initiative. The Climate Action Team also recommends future emission reduction strategies, such as using only low-GWP refrigerants in new vehicles, developing ethanol as an alternative fuel, reforestation, solar power initiatives for homes and businesses, and investor-owned utility energy efficiency programs. According to the report, implementation of current and future emission reduction strategies have the potential to achieve the goals set forth in Executive Order S-3-05.

Assembly Bill 32
In furtherance of the goals established in Executive Order S-3-05, the legislature enacted Assembly Bill 32 (AB 32, Núñez and Pavley), the California Global Warming Solutions Act of 2006, which Governor Schwarzenegger signed on September 27, 2006. AB 32 represents the first enforceable statewide program to limit GHG emissions from all major industries with penalties for noncompliance. AB 32 requires the State to undertake several actions – the major requirements are discussed below:

CARB Early Action Measures
CARB is responsible for carrying out and developing the programs and requirements necessary to achieve the goal of AB 32—the reduction of California's GHG emissions to 1990 levels by 2020. The first action under AB 32 resulted in CARB’s adoption of a report listing three specific early-action greenhouse gas emission reduction measures on June 21, 2007. On October 25, 2007, CARB approved an additional six early-action GHG reduction measures under AB 32. CARB has adopted regulations for all early action measures. The early-action measures are divided into three categories:

- Group 1 – GHG rules for immediate adoption and implementation
- Group 2 – Several additional GHG measures under development
- Group 3 – Air pollution controls with potential climate co-benefits

The original three adopted early action regulations meeting the narrow legal definition of “discrete early action GHG reduction measures” include:
- A low-carbon fuel standard to reduce the “carbon intensity” of California fuels;
- Reduction of refrigerant losses from motor vehicle air conditioning system maintenance to restrict the sale of “do-it-yourself” automotive refrigerants; and
- Increased methane capture from landfills to require broader use of state-of-the-art methane capture technologies.

The additional six early action regulations adopted on October 25, 2007, also meeting the narrow legal definition of “discrete early action GHG reduction measures,” include:
- Reduction of aerodynamic drag, and thereby fuel consumption, from existing trucks and trailers through retrofit technology;
- Reduction of auxiliary engine emissions of docked ships by requiring port electrification;
- Reduction of perfluorocarbons from the semiconductor industry;
- Reduction of propellants in consumer products (e.g., aerosols, tire inflators, and dust removal products);
The requirement that all tune-up, smog check and oil change mechanics ensure proper tire inflation as part of overall service in order to maintain fuel efficiency; and

Restriction on the use of sulfur hexafluoride (SF6) from non-electricity sectors if viable alternatives are available.

**State of California Greenhouse Gas Inventory and 2020 Limit**

As required under AB 32, on December 6, 2007, CARB approved the 1990 greenhouse gas emissions inventory, thereby establishing the emissions limit for 2020. The 2020 emissions limit was set at 427 MMTCO2e. CARB also projected the state’s 2020 GHG emissions under “business as usual” (BAU) conditions—that is, emissions that would occur without any plans, policies, or regulations to reduce GHG emissions. CARB used an average of the State’s GHG emissions from 2002 through 2004 and projected the 2020 levels based on population and economic forecasts. The projected net emissions totaled approximately 596 MMTCO2e. Therefore, the state must reduce its 2020 BAU emissions by approximately 29 percent in order to meet the 1990 target.

The inventory revealed that in 1990, transportation, with 35 percent of the state's total emissions, was the largest single sector, followed by industrial emissions, 24 percent; imported electricity, 14 percent; in-state electricity generation, 11 percent; residential use, 7 percent; agriculture, 5 percent; and commercial uses, 3 percent (these figures represent the 1990 values, compared to Table 4.2-2, which presents 2006 values). AB 32 does not require individual sectors to meet their individual 1990 GHG emissions inventory; the total statewide emissions are required to meet the 1990 threshold by 2020, however.

**CARB Mandatory Reporting Requirements**

In addition to the 1990 emissions inventory, CARB also adopted regulations requiring the mandatory reporting of GHG emissions for large facilities on December 6, 2007. The mandatory reporting regulations require annual reporting from the largest facilities in the state, which account for approximately 94 percent of point source greenhouse gas emissions from industrial and commercial stationary sources in California. About 800 separate sources fall under the new reporting rules and include electricity-generating facilities, electricity retail providers and power marketers, oil refineries, hydrogen plants, cement plants, cogeneration facilities, and industrial sources that emit over 25,000 tons of carbon dioxide each year from on-site stationary combustion sources. Transportation sources, which account for 38 percent of California’s total greenhouse gas emissions, are not covered by these regulations but will continue to be tracked through existing means. Affected facilities will begin tracking their emissions in 2008, to be reported beginning in 2009, with a phase-in process to allow facilities to develop reporting systems and train personnel in data collection. Emissions for 2008 may be based on best available emission data. Beginning in 2010, however, emissions reporting requirements will be more rigorous and will be subject to third-party verification. Verification will take place annually or every three years, depending on the type of facility.

**AB 32 Climate Change Scoping Plan**

As indicated above, AB 32 requires CARB to adopt a scoping plan indicating how reductions in significant GHG sources will be achieved through regulations, market mechanisms, and other actions. After receiving public input on their discussion draft of the Climate Change Proposed Scoping Plan released in June 2008, CARB released the Climate Change Proposed Scoping Plan in October 2008 that contains an outline of the proposed state strategies to achieve the 2020 greenhouse gas emissions limits. The CARB Governing Board approved the Climate Change Scoping Plan on December 11, 2008. Key elements of the Scoping Plan include the following recommendations:
• Expanding and strengthening existing energy efficiency programs as well as building and appliance standards;
• Achieving a statewide renewable energy mix of 33 percent;
• Developing a California cap-and-trade program that links with other Western Climate Initiative partner programs to create a regional market system;
• Establishing targets for transportation-related greenhouse gas emissions for regions throughout California and pursuing policies and incentives to achieve those targets;
• Adopting and implementing measures pursuant to existing State laws and policies, including California’s clean car standards, goods movement measures, and the Low Carbon Fuel Standard; and
• Creating targeted fees, including a public goods charge on water use, fees on high global warming potential gases, and a fee to fund the administrative costs of the state’s long-term commitment to AB 32 implementation.

Under the Scoping Plan, approximately 85 percent of the state’s emissions are subject to a cap-and-trade program where covered sectors are placed under a declining emissions cap. The emissions cap incorporates a margin of safety whereas the 2020 emissions limit will still be achieved even in the event that uncapped sectors do not fully meet their anticipated emissions reductions. Emissions reductions will be achieved through regulatory requirements and the option to reduce emissions further or purchase allowances to cover compliance obligations. It is expected that emission reduction from this cap-and-trade program will account for a large portion of the reductions required by AB 32.

Table 4.2-3, AB 32 Scoping Plan Measures (SPMs), lists CARB’s preliminary recommendations for achieving greenhouse gas reductions under AB 32 along with a brief description of the requirements and applicability.

<table>
<thead>
<tr>
<th>Scoping Plan Measure</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>SPM-1: California Cap-and-Trade Program linked to Western Climate Initiative</td>
<td>Implement a broad-based cap-and-trade program that links with other Western Climate Initiative Partner programs to create a regional market system. Ensure California’s program meets all applicable AB 32 requirements for market-based mechanisms. Capped sectors include transportation, electricity, natural gas, and industry. Projected 2020 business-as-usual emissions are estimated at 512 MTCO2e; preliminary 2020 emissions limit under cap-and-trade program are estimated at 365 MTCO2e (29 percent reduction).</td>
</tr>
<tr>
<td>SPM-2: California Light-Duty Vehicle GHG Standards</td>
<td>Implement adopted Pavley standards and planned second phase of the program. AB 32 states that if the Pavley standards (AB 1493) do not remain in effect, CARB shall implement equivalent or greater alternative regulations to control mobile sources.</td>
</tr>
<tr>
<td>SPM-3: Energy Efficiency</td>
<td>Maximize energy efficiency building and appliance standards, and pursue additional efficiency efforts. The Scoping Plan considers green building standards as a framework to achieve reductions in other sectors, such as electricity.</td>
</tr>
<tr>
<td>Scoping Plan Measure</td>
<td>Description</td>
</tr>
<tr>
<td>---------------------</td>
<td>-------------</td>
</tr>
<tr>
<td><strong>SPM-4: Renewables Portfolio Standard</strong></td>
<td>Achieve 33 percent Renewables Portfolio Standard by both investor-owned and publicly owned utilities.</td>
</tr>
<tr>
<td><strong>SPM-5: Low Carbon Fuel Standard</strong></td>
<td>CARB identified the Low Carbon Fuel Standard as a Discrete Early Action item and the final regulation was adopted on April 23, 2009. In January 2007, Governor Schwarzenegger issued Executive Order S-1-07, which called for the reduction of the carbon intensity of California’s transportation fuels by at least 10 percent by 2020.</td>
</tr>
<tr>
<td><strong>SPM-6: Regional Transportation-Related Greenhouse Gas Targets</strong></td>
<td>Develop regional greenhouse gas emissions reduction targets for passenger vehicles. SB 375 requires CARB to develop, in consultation with metropolitan planning organizations (MPOs), passenger vehicle greenhouse gas emissions reduction targets for 2020 and 2035 by September 30, 2010. SB 375 requires MPOs to prepare a sustainable communities strategy to reach the regional target provided by CARB.</td>
</tr>
<tr>
<td><strong>SPM-7: Vehicle Efficiency Measures</strong></td>
<td>Implement light-duty vehicle efficiency measures. CARB is pursuing fuel-efficient tire standards and measures to ensure properly inflated tires during vehicle servicing.</td>
</tr>
<tr>
<td><strong>SPM-8: Goods Movement</strong></td>
<td>Implement adopted regulations for port drayage trucks and the use of shore power for ships at berth. Improve efficiency in goods movement operations.</td>
</tr>
<tr>
<td><strong>SPM-9: Million Solar Roofs Program</strong></td>
<td>Install 3,000 MW of solar-electric capacity under California’s existing solar programs.</td>
</tr>
<tr>
<td><strong>SPM-10: Heavy/Medium-Duty Vehicles</strong></td>
<td>Adopt heavy- and medium-duty vehicle and engine measures targeting aerodynamic efficiency, vehicle hybridization, and engine efficiency.</td>
</tr>
<tr>
<td><strong>SPM-11: Industrial Emissions</strong></td>
<td>Require assessment of large industrial sources to determine whether individual sources within a facility can cost-effectively reduce greenhouse gas emissions and provide other pollution reduction co-benefits. Reduce greenhouse gas emissions from fugitive emissions from oil and gas extraction and gas transmission. Adopt and implement regulations to control fugitive methane emissions and reduce flaring at refineries.</td>
</tr>
<tr>
<td><strong>SPM-12: High Speed Rail</strong></td>
<td>Support implementation of a high-speed rail (HSR) system. This measure supports implementation of plans to construct and operate a HSR system between Northern and Southern California serving major metropolitan centers.</td>
</tr>
<tr>
<td><strong>SPM-13: Green Building Strategy</strong></td>
<td>Expand the use of green building practices to reduce the carbon footprint of California’s new and existing inventory of buildings.</td>
</tr>
<tr>
<td><strong>SPM-14: High GWP Gases</strong></td>
<td>Adopt measures to reduce high global warming potential gases. The Scoping Plan contains 6 measures to reduce high-GWP gases from mobile sources, consumer products, stationary sources, and semiconductor manufacturing.</td>
</tr>
<tr>
<td><strong>SPM-16: Sustainable Forests</strong></td>
<td>Preserve forest sequestration and encourage the use of forest biomass for sustainable energy generation. The federal government and California’s Board of Forestry and Fire Protection have the regulatory authority to implement the Forest Practice Act to provide for sustainable management practices. This measure is expected to play a greater role in the 2050 goals.</td>
</tr>
<tr>
<td><strong>SPM-17: Water</strong></td>
<td>Continue efficiency programs and use cleaner energy sources to move water. California will also establish a public goods charge for funding investments in water efficiency that will lead to as yet undetermined reductions in greenhouse gases.</td>
</tr>
<tr>
<td>Scoping Plan Measure</td>
<td>Description</td>
</tr>
<tr>
<td>----------------------</td>
<td>-------------</td>
</tr>
<tr>
<td>SPM-18: Agriculture</td>
<td>In the near-term, encourage investment in manure digesters and at the five-year Scoping Plan update determine if the program should be made mandatory by 2020. Increase efficiency and encourage use of agricultural biomass for sustainable energy production. CARB has begun research on nitrogen fertilizers and will explore opportunities for emission reductions.</td>
</tr>
</tbody>
</table>

*Source: California Air Resources Board, Climate Change Scoping Plan, (2008).*

**Senate Bill 97 (CEQA Guidelines)**

In August 2007, the legislature enacted SB 97 (Dutton), which directed the Governor’s Office of Planning and Research (OPR) to develop guidelines under CEQA for the mitigation of greenhouse gas emissions. A number of actions have taken place under SB 97, which are discussed below.

**OPR Climate Change Technical Advisory**

On June 19, 2008, OPR issued a technical advisory as interim guidance regarding the analysis of GHG emissions in CEQA documents (OPR 2008). The advisory indicated that a project’s GHG emissions, including those associated with vehicular traffic, and construction activities, should be identified and estimated. The advisory further recommended that the lead agency determine significance of the impacts and impose all mitigation measures that are necessary to reduce GHG emissions to a less than significant level. The advisory did not recommend a specific threshold of significance. Instead, OPR requested that CARB recommend a method for setting thresholds that lead agencies may adopt (OPR 2009).

**CEQA Guideline Amendments**


**Senate Bill 375**

The California legislature passed SB 375 (Steinberg) on September 1, 2008. SB 375 requires CARB to set regional greenhouse gas reduction targets after consultation with local governments. The target must then be incorporated within that region’s regional transportation plan (RTP), which is used for long-term transportation planning, in a Sustainable Communities Strategy. SB 375 also requires each region’s regional housing needs assessment (RHNA) to be adjusted based on the Sustainable Communities Strategy in its RTP. Additionally, SB 375 reforms the environmental review process to create incentives to implement the strategy, especially transit priority projects. The governor signed SB 375 into law on September 30, 2008. CARB is not expected to issue regional GHG reduction targets to local governments until the latter half of 2010.

**Title 24 Building Standards Code**

The California Energy Commission first adopted Energy Efficiency Standards for Residential and Nonresidential Buildings (California Code of Regulations, Title 24, Part 6) in 1978 in response to a legislative mandate to reduce energy consumption in the state. Although not originally intended to reduce GHG emissions, increased energy efficiency, and reduced consumption of electricity, natural gas, and other fuels would result in fewer GHG emissions from residential and nonresidential buildings subject to the standard. The standards are updated periodically to allow for the consideration and inclusion of new...
energy efficiency technologies and methods. The latest revisions were adopted in 2008 and became effective on January 1, 2010.

Part 11 of the Title 24 Building Standards Code is referred to as the California Green Building Standards Code (CALGreen Code). The purpose of the CALGreen Code is to “improve public health, safety and general welfare by enhancing the design and construction of buildings through the use of building concepts having a positive environmental impact and encouraging sustainable construction practices in the following categories: (1) Planning and design; (2) Energy efficiency; (3) Water efficiency and conservation; (4) Material conservation and resource efficiency; and (5) Environmental air quality (California Building Standards Commission 2009). The CALGreen Code is not intended to substitute or be identified as meeting the certification requirements of any green building program that is not established and adopted by the California Building Standards Commission (CBSC). The CBSC has released a 2010 Draft California Green Building Standards Code on its website (California Building Standards Commission 2010). It is anticipated the this update to Part 11 of the Title 24 Building Standards Code will be effective on January 1, 2011. Unless otherwise noted in the regulation, all newly constructed buildings in California are subject of the requirements of the CALGreen Code.

Regional Programs
In July 2007, the Yolo-Solano Air Quality Management District (YSAQMD) adopted the Handbook for Assessing and Mitigating Air Quality Impacts (CEQA Handbook). The CEQA Handbook does not provide any quantitative thresholds for assessing greenhouse gas emissions, but does state that greenhouse gas emissions are an area of concern in environmental documents. The CEQA Handbook recommends that at least a qualitative assessment is made, noting that vehicle trips represent a particular area of concern.

Local Plans and Policies
University of California Policy on Sustainable Practices
The University of California Policy on Sustainable Practices was adopted by The Regents in 2006 and revised in March 2007, March 2008, and September 2009. The policy was developed to standardize campus practices and is a system-wide commitment to minimize the University of California’s impact on the environment and reduce the University’s dependence on non-renewable energy sources. The University of California Policy on Sustainable Practices promotes the principles of energy efficiency and sustainability in the following areas:

- Green Building Design
- Clean Energy Standard
- Climate Protection Practices
- Sustainable Transportation Practices
- Sustainable Operations
- Recycling and Waste Management
- Environmentally Preferable Purchasing Practices
- Food

The policy guidelines that address these topics recommend that University operations:
- Incorporate the principles of energy efficiency and sustainability in all capital projects, operations and maintenance within budgetary constraints and programmatic requirements.

- Minimize the use of non-renewable energy sources on behalf of UC’s built environment by creating a portfolio approach to energy use, including use of local renewable energy and purchase of green power from the grid as well as conservation measures that reduce energy consumption.

- Incorporate alternative means of transportation to/from and within the campus to improve the quality of life on campus and in the surrounding community. The campuses will continue their strong commitment to provide affordable on-campus housing, in order to reduce the volume of commutes to and from campus. These housing goals are detailed in the campuses’ LRDPs.
  
  - Track, report and minimize GHG emissions on behalf of UC operations.
  
  - Minimize the amount of University-generated waste sent to landfill.
  
  - Utilize the University’s purchasing power to meet its sustainability objectives.

The University of California has signed the American College and University Presidents Climate Commitment. Each signatory commits to completing an inventory of GHG emissions within one year, and to developing, within two years, an institutional plan to achieve climate neutrality as soon as possible. The commitment also includes specific interim actions, including requiring that new campus construction will be built to at least the U.S. Green Building Council’s LEED Silver standard or equivalent; purchasing Energy Star appliances; offsetting greenhouse gas emissions generated by institutional air travel; encouraging and providing access to public transportation; purchasing or producing at least 15 percent of the institution’s electricity consumption from renewable sources; supporting climate and sustainability shareholder proposals at companies where the institution’s endowment is invested; and adopting measures to reduce waste.

**UC Davis 2003 Long Range Development Plan**

The 2003 LRDP is the plan for the development of the campus. Although the 2003 LRDP does not contain policies that specifically address GHG emissions, it does contain a number of elements with respect to fuel- and energy-efficiency provisions and elements that would encourage walking and bicycling on campus and in surrounding neighborhoods, all of which would reduce GHG emissions.

**UC Davis Climate Action Plan**

As discussed earlier in this section, the UC Policy on Sustainable Practices – Climate Protection section targets three goals: reduction of GHG emissions back to 2000 levels by 2014, to 1990 levels by 2020, and ultimately climate neutrality. Climate neutrality is defined in the Policy as the University having a net zero impact on the Earth’s climate, which is to be achieved by minimizing GHG emissions as much as possible and using carbon offsets or other measures to mitigate the remaining GHG emissions.

UC Davis has prepared the 2009-2010 Climate Action Plan (CAP), which includes both the Davis and Sacramento campuses, as well as outlying facilities. The CAP describes and addresses policy and regulatory requirements of (1) the UC Policy on Sustainable Practices, (2) AB 32, (3) the American College and University Presidents Climate Commitment, (4) CEQA, and (4) U.S. EPA reporting requirements. The CAP provides documentation of how campus GHG emissions are calculated, a report of current (2008) emissions, estimates of past (to 1990) and future emissions (to 2020), a statement of GHG emission reduction goals, a characterization of options and methods to reduce emissions, and a blueprint for future action.
The CAP focuses on the 2014 and 2020 targets, with the understanding that climate neutrality will require fundamental shifts in global and national energy policy, energy production, and technologies currently using fossil fuels. Further, the CAP focuses on emissions related to campus operations, instead of commuting and air travel, because emissions related to commuting and air travel are less than one-quarter those of campus operations. The CAP does provide analysis of commuting and air travel reduction options, but does not quantify emissions reductions for those options.

In the CAP, GHG emissions were calculated back to 1990, using hard data whenever possible (and projected data when not), and including nearly every source of emissions. Calculated emissions for all of UC Davis, excluding commuting and air travel, for 2000 are 246,000 MTCO2e and for 1990 are 142,000 MTCO2e. In 2008, inventoried emissions (in CCAR), excluding commuting and air travel, totaled 238,000, indicating that UC Davis had already met the 2014 target. Thus, the CAP defined a new emissions target of 210,000 MTCO2e, almost 15 percent below the 2000 emissions, as the new 2014 target. The 2020 target, to reach 1990 emissions, is about 40 percent below the 1990 emissions.

Four years of verified inventories of emissions have shown consistently that the Davis campus contributes about 70 percent of the emissions total, the Sacramento campus contributes about 29 percent of the total, and the outlying facilities contribute about 1 percent of the total.

7.7.3 Standards of Significance

In accordance with Senate Bill (SB) 97, the Natural Resources Agency adopted amendments to the State CEQA Guidelines on December 30, 2009, which includes criteria for evaluating GHG emissions. According to the amended Appendix G of the State CEQA Guidelines, a project would have a significant effect on the environment if it would:

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

- Conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of greenhouse gases.

The amended State CEQA Guidelines include a new Section 15064.4, which states that, when making a determination of the significance of GHG emissions, a lead agency shall have discretion to determine whether to (1) Use a model or methodology to quantify greenhouse gas emissions resulting from a project, and which model or methodology to use; and/or (2) Rely on a qualitative analysis or performance based standards. Section 15064.4 also provides that a lead agency may consider the following factors when assessing the significance of GHG emissions on the environment: (1) The extent to which the project may increase or reduce greenhouse gas emissions as compared to the existing environmental setting; (2) Whether the project emissions exceed a threshold of significance that the lead agency determines applies to the project; and (3) The extent to which the project complies with regulations or requirements adopted to implement a statewide, regional, or local plan for the reduction or mitigation of greenhouse gas emissions.

Under CEQA, “the determination of whether a project may have a significant effect on the environment calls for careful judgment on the part of the public agency involved, based to the extent possible on

---

8 The adopted amendments may be viewed at the following Web site: http://ceres.ca.gov/ceqa/guidelines/. 2009.
scientific and factual data.”9 CEQA grants agencies with the general authority to adopt criteria for determining whether a given impact is “significant.”10 When no guidance exists under CEQA, the agency may look to and assess general compliance with comparable regulatory schemes.

7.7.4 2003 LRDP EIR Impacts and Mitigation Measures

Impacts of campus growth under the 2003 LRDP through 2015-16 on greenhouse gas emissions were not evaluated in the 2003 LRDP EIR. The inclusion of greenhouse gas emission as an environmental impact for CEQA analysis has recently evolved. In 2010, modifications to Appendix G of the CEQA Guidelines resulted in the inclusion of detail guidance for CEQA greenhouse gas impact analysis.

7.7.5 Environmental Checklist and Discussion

<table>
<thead>
<tr>
<th>GREENHOUSE GAS EMISSIONS</th>
<th>Potentially Significant Impact</th>
<th>Less than Significant with Project-level Mitigation</th>
<th>Impact adequately addressed in 2003 LRDP EIR</th>
<th>Less than Significant Impact</th>
<th>No Impact</th>
</tr>
</thead>
<tbody>
<tr>
<td>Would the project…</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>a) Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment?</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>✓</td>
</tr>
<tr>
<td>b) Conflict with an applicable plan, policy, or regulation adopted for the purpose or reducing the emissions of greenhouse gases?</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>✓</td>
</tr>
</tbody>
</table>

a) The proposed project would not generate increased greenhouse gas emissions that would have a significant effect on the environment. The existing campus bookstore operation results in energy usage with associated contributions to greenhouse gas emissions. During operation of the proposed project, the UC Davis bookstore of approximately 30,000 square feet would not operate and the proposed project is expected to use less energy than the existing bookstore because it would be a smaller building of 18,000 square feet with efficient heating, cooling, and lighting equipment. In addition, the proposed project would not increase the campus population and would not increase the number of vehicle trips. Overall, the proposed project is not expected to increase energy use and greenhouse gas emissions would not increase as a result of the proposed project. No impact would occur.

b) With no increase to greenhouse gas emissions, the proposed project would not conflict with plans, policies, or regulations to reduce greenhouse gas emissions. No impact would occur.

Summary

The project will have no increase to greenhouse gas emissions. No project-specific mitigation measures related to greenhouse gas emissions are required.

---

9  State CEQA Guidelines Section 15064(b).
7.8 HAZARDS & HAZARDOUS MATERIALS

7.8.1 Background

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

Campus

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

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

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

Project Site

The project site is an existing parking lot and is used by UC Davis students, employees, and visitors for general public parking. In addition, the parking lot is used to access service areas for deliveries and solid waste pickup at the Silo food service building and the Craft Center building.
7.8.2 2003 LRDP EIR Standards of Significance

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

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

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

7.8.3 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. The proposed project is within the scope of analysis in the 2003 LRDP EIR and potentially significant hazards and hazardous materials impacts identified in the 2003 LRDP EIR that are relevant to the proposed project are presented below with their corresponding levels of significance before and after application of mitigation measures identified in the 2003 LRDP EIR. In addition, LRDP Impact 4.7-12, presented below, is considered less than significant prior to mitigation, but the 2003 LRDP EIR identified mitigation to further reduce the significance of these impacts. Less than significant impacts without mitigation measures are not presented here.

<table>
<thead>
<tr>
<th>2003 LRDP EIR Impacts</th>
<th>Level of Significance Prior to Mitigation</th>
<th>Level of Significance After Mitigation</th>
</tr>
</thead>
<tbody>
<tr>
<td>HAZARDS &amp; HAZARDOUS MATERIALS</td>
<td></td>
<td></td>
</tr>
<tr>
<td>4.7-12 Construction activities on campus under the 2003 LRDP would not expose construction workers and campus occupants to contaminated soil or groundwater.</td>
<td>LS</td>
<td>LS</td>
</tr>
</tbody>
</table>

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

A mitigation measure in the 2003 LRDP EIR that is applicable to the proposed project is presented below. Since this mitigation measure is already being carried out as part of implementation of the 2003 LRDP, it is considered part of the project description and will not be readopted in this Initial Study or Negative Declaration. Nothing in this Initial Study in any way alters the obligations of the campus to implement 2003 LRDP EIR mitigation measures.
### 2003 LRDP EIR Mitigation Measures

**HAZARDS & HAZARDOUS MATERIALS**

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

**7.8.4 Environmental Checklist and Discussion**

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

**a)**

**Hazardous Chemicals**

The proposed project would include incidental construction-related hazardous materials and hazardous materials related to building cleaning and operation of a retail bookstore. The project...
would not increase overall hazardous materials usage because this minor level of hazardous materials use is currently taking place at the bookstore operation. No impact would occur.

**Radioactive Materials**

No radioactive materials would be used with the proposed project. No impact would occur.

**Biohazardous Materials**

No biohazardous materials would be used with the proposed project. No impact would occur.

**Laboratory Animals**

No laboratory animals would be used with the proposed project. No impact would occur.

b) Relocation of the bookstore operation would not increase hazardous materials usage and accordingly, would not increase risks of upset or accident conditions related to hazardous materials. No impact would occur.

c) The proposed project would not increase hazardous materials usage and schools would not be affected by hazardous materials usage from the proposed project. The proposed relocation would be further from area schools than the existing bookstore location. No impact would occur.

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

The 2003 LRDP EIR found that construction activities under the 2003 LRDP would not expose construction workers and campus occupants to contaminated soil or groundwater (Impact 4.7-12). Campus policy requires that due diligence surveys be performed for all proposed project sites as part of the project planning process. The project site is not expected to contain contamination from prior uses and an evaluation of the site conditions will be conducted as part of further project coordination. Federal and state regulations require that workers who may be exposed to contaminants during the course of their jobs know of the presence of contamination and be properly trained. In addition, these regulations require that appropriate engineering and administrative controls and protective equipment be provided to reduce exposure to safe levels. Current campus due diligence policy and Cal/OSHA regulations minimize the exposure of construction workers to contaminants. In addition, if contaminants are identified on project sites, the campus would coordinate site remediation. Therefore, the impact would be less than significant. To ensure that due diligence surveys are performed and to further reduce this less-than-significant impact, LRDP Mitigation 4.7-12 is being implemented as part of the proposed project.

e) The 2003 LRDP EIR found that development of certain projects on the west campus under the 2003 LRDP could result in safety hazards associated with aircraft. However, the proposed project is not one of these projects and would not conflict with airport operations. No impact would occur.

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. No impact would occur.
g) The 2003 LRDP EIR found that implementation of the 2003 LRDP could interfere with the campus’ Emergency Operations Plan through construction-related road closures that would render roads impassable by emergency response vehicles (Impact 4.7-17). The proposed project would not require road closures to emergency response vehicles. No impact 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 proposed project is within the core campus and would not be subject to wildland fire risk. Therefore, no impact would occur.

Summary

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 impacts that were not previously addressed. Mitigation measures 4.7-12 and 4.7-17 from the 2003 LRDP EIR are relevant to the proposed project and reduce the significance of hazards and hazardous materials impacts to the extent feasible. No new mitigation measures were identified that would further reduce the impacts of the project.
7.9 **HYDROLOGY & WATER QUALITY**

7.9.1 **Background**

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

**Campus**

**Surface Water Resources**

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

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

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

**Groundwater Resources**

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

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

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

Flooding & Drainage

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

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

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

Project Site

The project site is a developed two-acre, core campus parking lot covered with asphalt except for approximately 30 tree locations that measure approximately three feet by three feet. Drainage for stormwater at the site is provided by drainage inlets within the existing parking lots and underground drainage pipes that connect to the campus stormwater drainage system.

7.9.2 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.

7.9.3 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. The proposed project is within the scope of analysis in the 2003 LRDP EIR and 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 is also relevant to reduce the magnitude of cumulative impact 4.8-10, but this impact is identified as significant and unavoidable because mitigation falls within other jurisdictions to enforce and monitor and therefore cannot be guaranteed by the University of California.

<table>
<thead>
<tr>
<th>2003 LRDP EIR Impacts</th>
<th>Level of Significance Prior to Mitigation</th>
<th>Level of Significance After Mitigation</th>
</tr>
</thead>
<tbody>
<tr>
<td>HYDROLOGY &amp; WATER QUALITY</td>
<td></td>
<td></td>
</tr>
<tr>
<td>4.8-1 Campus construction activities associated with implementation of the 2003 LRDP would not contribute substantial loads of sediment or other pollutants in storm water runoff that could degrade receiving water quality.</td>
<td>LS</td>
<td>LS</td>
</tr>
<tr>
<td>4.8-10 Development under the 2003 LRDP, in conjunction with construction activities, increased impervious surfaces, and alterations to drainage patterns associated with other development in the region that would increase impervious surface coverage in the watershed, could increase storm water runoff, and could provide substantial sources of polluted runoff, which could affect receiving water quality.</td>
<td>S</td>
<td>SU</td>
</tr>
</tbody>
</table>

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

Mitigation measures in the 2003 LRDP EIR that are applicable to the proposed project are presented below. Since these mitigation measures are already being carried out as part of implementation of the 2003 LRDP, they are considered part of the project description and will not be readopted in this Initial Study or Negative Declaration. Nothing in this Initial Study in any way alters the obligations of the campus to implement 2003 LRDP EIR mitigation measures.
2003 LRDP EIR Mitigation Measures
HYDROLOGY & WATER QUALITY

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

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

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

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

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

7.9.4 Environmental Checklist and Discussion
HYDROLOGY & WATER QUALITY

<table>
<thead>
<tr>
<th>Would the project…</th>
<th>Potentially Significant Impact</th>
<th>Less than Significant with Project-level Mitigation</th>
<th>Impact adequately addressed in 2003 LRDP EIR</th>
<th>Less than Significant Impact</th>
<th>No Impact</th>
</tr>
</thead>
</table>
a) Violate any water quality standards or waste discharge requirements? | ☐ | ☐ | ☑ | ☐ |
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)? | ☐ | ☐ | ☐ | ☑ | ☐ |
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? | ☐ | ☐ | ☐ | ☑ | ☐ |
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? | ☐ | ☐ | ☐ | ☑ | ☐ |
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? | ☐ | ☐ | ☐ | ☐ | ☑ |
f) Otherwise substantially degrade water quality? | ☐ | ☐ | ☐ | ☑ | ☐ |
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? ☑  ☐  ☐  ☐  ☐  ☐

h) Place within a 100-year flood hazard area structures which would impede or redirect flood flows? ☑  ☐  ☐  ☐  ☐  ☐

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? ☐  ☐  ☐  ☑  ☐

j) Inundation by seiche, tsunami, or mudflow? ☑  ☐  ☐  ☐  ☐  ☐

**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**

Operation of the proposed project would not increase flows to the campus wastewater treatment facility because the existing campus bookstore would be relocated to the project site with no increase to the number of employees or customers at the bookstore. Wastewater generation from proposed project would be less than or equal to the amount of wastewater generated at the existing campus bookstore. No impact would occur.

b) The proposed project would have no effect on groundwater consumption because the existing campus bookstore would be relocated to the temporary building during operation of the proposed project. Transferring the bookstore sales from the one location to another location within the UC Davis core campus would not produce an increase in the ground water consumption. No impact would occur.

c, d, e) The proposed project would have no effect on erosion, flooding, or stormwater pollutant sources because the site is currently impervious and the amount of impervious surface would not be increased as a result of the proposed project. No impact would occur.

g) The proposed project would have no effect on flooding within housing areas because the project is not near a housing area and would have no effect on stormwater drainage. No impact would occur.
h) The proposed project would be outside of the 100-year floodplain and would not increase the risk of flooding to non-residential structures. No impact would occur.

i) The campus is located approximately 23 miles downstream of the Monticello Dam (forming Lake Berryessa) and approximately 15 miles downstream of the Putah Diversion Dam. An inundation study prepared by the U.S. Bureau of Reclamation shows that, in the highly unlikely case of a dam breach, the campus (as well as the City of Davis) would be inundated under a maximum of 3 to 9 feet of water approximately 3.5 to 4 hours following the breach (USBR 1998). However, the probability of such a release is far less than one in one million (USBR 2000). As of June 2000, Monticello Dam was determined to be in satisfactory condition, and the dam exhibited no unusual cracks, seeps, or deformations. In addition, the State Department of Dam Safety evaluates dams regularly, which would give adequate time to respond to any deterioration in the safety of the structure. Therefore, the risk of flooding on campus as a result of a dam failure is considered to be a less-than-significant impact.

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

Summary

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 an new significant impacts that were not previously addressed. Mitigation measures 4.8-1 and 4.8-10 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. No new mitigation measures were identified that would further reduce the impacts of the project.
7.10 LAND USE & PLANNING

7.10.1 Background

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

Campus

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

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

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

Project Site

The Silo parking lot is approximately two acres with approximately 80 parking spaces near the intersection of Hutchison Drive and California Avenue in the UC Davis core campus. The parking lot is accessed from a single driveway on the south side of Hutchison Drive. The drive aisles for the parking lot extend from north to south and the parking lot provides parking for users with campus parking permits and provides parking meters for motorists seeking short-term parking.

In addition to core campus parking, the Silo parking lot serves as a service driveway for large and small vehicles that deliver and pickup items from the Silo food service buildings. The Silo buildings receive daily deliveries of supplies and the delivery trucks utilize the Silo parking lot to approach the building and park during loading and unloading. The parking lot also provides a turnaround area for private vehicles that have approached the Silo area eastbound on Hutchison Drive. These vehicles are not allowed to continue east past the campus entry gate and are not allowed to utilize the bus terminal along the north side of the street. The Silo parking provides a turnaround option for these vehicles to pickup or drop off passengers and then return westbound on Hutchison Drive.

The land uses surrounding the Silo parking lot include Hutchison Drive to the north, a busy arterial street with high volumes of bike, bus, and vehicular use. Across the street from the Silo parking lot on the north side of Hutchison Drive is the Silo bus terminal, a recently constructed bus terminal providing bus service.
with parking for approximately 16 busses. East of the Silo parking lot is the Silo food service building and the Craft Center building. The food service building is a major campus activity center providing food service for students and employees in the core campus. The Craft Center building provides classes and workspace for non-academic courses in a variety of hobbies and craft activities such as woodworking, weaving, sewing, and metalworking.

South of the project site is a landscaped area with a pedestrian path and a bike path that serve a high volume of campus users. South of the landscaped area is Bainer Hall, a large academic teaching and research building and The Barn a small academic and administrative building. West of the project site are the Surge IV temporary buildings that provide administrative space for campus users. These temporary buildings are single-story and have been in use for approximately 30 years.

The 2003 Long Range Development Plan (LRDP) is the guiding land use planning document for the UC Davis campus. The 2003 LRDP land use designation for the project site is Academic and Administrative-High Intensity indicating that the intended long-term use of the project site is for academic and administrative functions with building heights that could exceed four stories.

7.10.2 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.

7.10.3 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.

7.10.4 Environmental Checklist and Discussion

<table>
<thead>
<tr>
<th>LAND USE &amp; PLANNING</th>
<th>Potentially Significant Impact</th>
<th>Less than Significant with Project-level Mitigation</th>
<th>Impact adequately addressed in 2003 LRDP EIR</th>
<th>Less than Significant Impact</th>
<th>No Impact</th>
</tr>
</thead>
<tbody>
<tr>
<td>Would the project…</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>a) Physically divide an established community?</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>✔</td>
</tr>
</tbody>
</table>
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? □ □ □ □ ✓

c) Conflict with any applicable habitat conservation plan or natural community conservation plan? □ □ □ □ ✓

d) Result in development of land uses that are substantially incompatible with existing adjacent land uses or with planned uses? □ □ □ □ ✓

a) The proposed project would have no potential to physically divide an established community. The proposed project would construct a temporary building on an existing parking lot. No impact would occur and no additional analysis is required.

b) The 2003 Long Range Development Plan (LRDP) is the guiding land use planning document for the UC Davis campus. The 2003 LRDP land use designation for the project site is Academic and Administrative-High Intensity indicating that the intended long-term use of the project site is for academic and administrative functions with building heights that could exceed four stories. The proposed use of the project would be consistent with the land use designation in the 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 effects HCPs for VELB at Russell Ranch. The project is located approximately 5 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 would be compatible with the adjacent land uses. The proposed temporary bookstore would have no external effects that could restrict use of the adjacent land. The adjacent areas are heavily utilized areas of the UC Davis core campus. 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 and no new mitigation measures have been identified that would further reduce the previously identified impacts, nor would it introduce any new significant impacts that were not previously addressed.
7.11 MINERAL RESOURCES

7.11.1 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.

7.11.2 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.

7.11.3 Environmental Checklist and Discussion

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

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

Summary

The proposed project would not result in any mineral resource impacts and no mitigation is required.
7.12 NOISE

7.12.1 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 sources at the project site consist of automobile traffic and truck delivery traffic from vehicles with the site and noise from Hutchison Drive, the busy, adjacent roadway.

7.12.2 2003 LRDP EIR Standards of Significance

The 2003 LRDP EIR considers a noise impact significant if growth under the 2003 LRDP would result in the following:
- Exposure of persons to or generation of noise levels in excess of levels set forth in Table 4.10-3 of the 2003 LRDP EIR.

### Table 7.11.2: Thresholds of Significance for Noise Evaluations

<table>
<thead>
<tr>
<th>Noise Sourcea</th>
<th>Criterion Noise Levelb</th>
<th>Substantial Increase in Noise Levelb</th>
</tr>
</thead>
<tbody>
<tr>
<td>Road Traffic and Other Long-Term Sources</td>
<td>65 dBA CNEL</td>
<td>&gt;=3 dBA if CNEL w/project is &gt;= 65 dBA</td>
</tr>
<tr>
<td>Construction (temporary)</td>
<td>80 dBA L_{eq(hb)}c daytime (7:00 a-7:00 p) 80 dBA L_{eq(hb)} evening (7:00 p-11:00 p) 70 dBA L_{eq(hb)} nighttime (11:00 p-7:00 a)</td>
<td>Not Applicable</td>
</tr>
</tbody>
</table>

Source: 2003 LRDP EIR

- The 2003 LRDP would not substantially increase rail activity; therefore, a threshold of significance for rail noise is not included in this table.
- At noise-sensitive land use unless otherwise noted. Noise-sensitive land uses include residential and institutional land uses.
- L_{eq(hb)} 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.

#### 7.12.3 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. The proposed project is within the scope of analysis in the 2003 LRDP EIR and 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.

<table>
<thead>
<tr>
<th>2003 LRDP EIR Impacts</th>
<th>Level of Significance Prior to Mitigation</th>
<th>Level of Significance After Mitigation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Construction of campus facilities pursuant to the 2003 LRDP could expose nearby receptors to excessive groundborne vibration and airborne or groundborne noise.</td>
<td>PS</td>
<td>LS</td>
</tr>
</tbody>
</table>

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

Mitigation measures in the 2003 LRDP EIR that are applicable to the proposed project are presented below. Since these mitigation measures are already being carried out as part of implementation of the 2003 LRDP, they are considered part of the project description and will not be readopted in this Initial
Study or Negative Declaration. 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.

#### 7.12.4 Environmental Checklist and Discussion

**NOISE**

Would the project…

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

☐ ☐ ☐ ☐ ☑

a,c ) The proposed project would not increase roadway noise levels because the project would move an existing operation to a temporary building but would not increase the campus population and the overall number of people generating roadway noise would not increase. No impact would occur.

b,d) The proposed project would include construction activities such as asphalt cutting and removal, truck trips, grading, concrete delivery and pumping, and assembly of the manufactured temporary building. Pile driving, blasting, or other unusual construction techniques are not anticipated. The project is not located adjacent to receptors such as residential areas that would be sensitive receptors. The 2003 LRDP EIR found that construction of campus facilities pursuant to the 2003 LRDP could expose nearby receptors to excessive groundborne vibration and airborne or groundborne noise (Impact 4.10-1). Construction under the 2003 LRDP, including the proposed project, would require temporary construction activities using conventional construction techniques and equipment that would not generate substantial levels of vibration or groundborne noise. Routine noise levels from conventional construction activities (with the normal number of equipment operating on the site) range from 75 to 86 dBA Leq at a distance of 50 feet, from 69 to 80 dBA Leq at a distance of 100 feet, from 55 to 66 dBA Leq at a distance of 500 feet, and 48 to 60 dBA Leq at a distance of 1,000 feet (although noise levels would likely be lower due to additional attenuation from ground effects, air absorption, and shielding from miscellaneous intervening structures). Noise from project construction is predicted to be below the significance criteria of 80 dBA Leq daytime and evening and 70 dBA Leq nighttime at a distance of 100 feet or more from the construction activity. However, noise from construction would be audible and would temporarily elevate the local ambient noise level to some degree at distances greater than 100 feet from construction. 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.

e) The proposed project would not change the number of people exposed to airport noise at the UC Davis airport. No impact would occur.

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

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 impacts that were not previously addressed. Mitigation measure 4.10-1 from the 2003 LRDP EIR is relevant to the proposed project and reduces the significance of noise impacts to the extent feasible. No new mitigation measures were identified that would further reduce the impacts of the project.
7.13 POPULATION & HOUSING

7.13.1 Background

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

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

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

Project Site

The project site is currently a core campus parking. No housing is located or planned on or adjacent to the project site and the project would result in no population changes to the campus.

7.13.2 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.

7.13.3 2003 LRDP EIR Impacts and Mitigation Measures

Impacts of campus growth under the 2003 LRDP through 2015-16 on population and housing are evaluated in Section 4.2 of the 2003 LRDP EIR. The proposed project is within the scope of analysis in
the 2003 LRDP EIR and no significant impacts identified in the 2003 LRDP EIR related to population and housing are relevant to the proposed project.

7.13.4 Environmental Checklist and Discussion

### POPULATION & HOUSING

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

a-d) The proposed project would result in no increase to the campus population. Existing bookstore employees would continue to work at the relocated bookstore. The project is not expected to result in any changes to off-campus population because the change is a campus operational change with no modification of on or off campus employment or enrollment. The proposed project would result in no changes to infrastructure or other modifications that could relocate or cause population changes. Similarly, no changes are expected to on or off campus housing demand or construction. No impact would occur.

**Summary**

The project will have no impact to population and housing. No LRDP EIR Mitigation Measures or project-specific mitigation measures related to population and housing resources are required.
7.14 PUBLIC SERVICES

7.14.1 Background

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

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

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

- **Fire Protection:** The UC Davis Fire Department provides primary fire response and prevention, natural disaster response, hazardous materials incident response, and emergency medical service to the main campus. The fire department’s goal is to respond to 90 percent of campus emergency calls within 6 minutes (Trauernicht 2010). As of 2010, the UC Davis Fire Department achieves its stated standard of response (Trauernicht 2010).

- **Police:** In 2001-02, the UC Davis Police Department employed approximately 38 sworn officers to provide 24-hour service to the Davis and Sacramento campuses and facilities owned and leased by UC Davis. 19 officers provide law enforcement services to the Davis campus with an estimated daytime population of 40,185 (including UC and non-UC employees, students, and dependents living in on-campus housing). 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 per 1,000 population on the Davis campus. The Police Department is currently staffed at a level of approximately 0.5 officers per 1,000 on the Davis campus (Souza 2010).

- **Schools:** In 2001-02 prior to adoption of the 2003 LRDP EIR, 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. Since 2003, enrollment has decreased slightly with the 2009-09 academic year containing a total enrollment of 8,573 students.

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

Project Site

The project site is currently vacant and there are no existing or planned public service facilities (fire, police, schools or libraries) on or adjacent to the site.
7.14.2 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.

7.14.3 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 4.2 of the 2003 LRDP EIR. The proposed project is within the scope of analysis in the 2003 LRDP EIR and no significant impacts identified in the 2003 LRDP EIR related to public services are relevant to the proposed project.

7.14.4 Environmental Checklist and Discussion

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

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

The proposed bookstore relocation site would not modify fire or police protection at UC Davis. The campus fire and police services would serve the temporary bookstore. The project would result in no additional demand for fire and police services at UC Davis or in the surrounding area because the existing campus bookstore already receives fire and police services. The temporary relocation site
would be closer to the campus fire and police stations than the existing bookstore building. No impact would occur.

a, iii) **Schools**

The proposed project would result in no increased to the campus or regional population. Accordingly, the project would not result in increased students for area schools and no increase in the demand for school facilities. No impact would occur.

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

a, v) **Libraries**

The proposed project would result in no increased to the campus or regional population. Accordingly, the project would not result in an increase to the demand for school facilities. No impact would occur.

**Summary**

The project will have no impact to public services. No LRDP EIR Mitigation Measures or project-specific mitigation measures related to public services are required.
7.15 RECREATION

7.15.1 Background

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

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

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

Project Site

The project site is currently a campus parking lot and there are no existing or planned recreation facilities on or adjacent to the site.

7.15.2 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.

7.15.3 2003 LRDP EIR Impacts and Mitigation Measures

Impacts of campus growth under the 2003 LRDP through 2015-16 on recreation facilities are evaluated in Section 4.2 of the 2003 LRDP EIR. The proposed project is within the scope of analysis in the 2003 LRDP EIR and no significant impacts identified in the 2003 LRDP EIR related to recreation facilities are relevant to the proposed project.
7.15.4  Environmental Checklist and Discussion

<table>
<thead>
<tr>
<th>RECREATION</th>
<th>Potentially Significant Impact</th>
<th>Less than Significant Impact with Project-level Mitigation</th>
<th>Impactadequately addressed in 2003 LRDP EIR</th>
<th>Less than Significant Impact</th>
<th>No Impact</th>
</tr>
</thead>
<tbody>
<tr>
<td>Would the project…</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>a)  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?</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☑</td>
</tr>
<tr>
<td>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?</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☑</td>
</tr>
</tbody>
</table>

a,b)  The proposed project would result in no increase to the campus or regional population and accordingly, would not increase the demand for or use of recreational facilities. Consequently, the project would not contribute to deterioration of recreational facilities or the need to construct additional recreational facilities. No impact would occur.

Summary

The project will have no impact to recreation resources. No LRDP EIR Mitigation Measures or project-specific mitigation measures related to recreation resources are required.
7.16 TRANSPORTATION, CIRCULATION, & PARKING

7.16.1 Background

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

Campus

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

Level of service (LOS) is a general measure of traffic operating conditions whereby a letter grade, from A (the best) to F (the worst), is assigned to roadway intersections. These grades represent the comfort and convenience associated with driving from the driver’s perspective. To assess the worst-case traffic conditions, LOS is measured during morning (7 to 9 AM) and afternoon (4 to 6 PM) peak commute times. The LOS of campus roadways varies. Monitoring of campus intersections during peak hours in Fall 2001 and Fall 2002 found that the Hutchison Drive/Health Sciences Drive intersection (with LOS E during the PM peak hour) was the only study intersection to operate below the campus’ operation standard (standards are identified in the following section). The campus has since installed a traffic signal at this location. Recent monitoring in 2008 indicated that traffic levels have not increased and that no additional traffic signals would be needed immediately.

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 11,500 parking spaces were provided on campus as in Fall of 2008.

Project Site

The project site includes both the site for constructing the temporary bookstore at the two-acre Silo parking lot and the site for the gate relocation and roadway improvements near on Hutchison Drive near Kleiber Hall Drive. The proposed gate relocation would include removal of the existing campus entry gate along Hutchison Drive immediately west of California Avenue. The existing campus entry gate establishes a barrier restricting public vehicular access and allowing bicycles, transit vehicles, and service vehicles entrance to the closed core campus area.
7.16.2 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 the 2003 LRDP EIR, future volumes were 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.

- 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.
### 7.16.3 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. The proposed project is within the scope of analysis in the 2003 LRDP EIR and significant and potentially significant traffic, circulation, and parking impacts identified in the 2003 LRDP EIR that are relevant to the proposed project are presented below with their corresponding levels of significance before and after application of mitigation measures identified in the 2003 LRDP EIR.

<table>
<thead>
<tr>
<th>2003 LRDP EIR Impacts</th>
<th>Level of Significance Prior to Mitigation</th>
<th>Level of Significance After Mitigation</th>
</tr>
</thead>
<tbody>
<tr>
<td>TRANSPORTATION, CIRCULATION, &amp; PARKING</td>
<td></td>
<td></td>
</tr>
<tr>
<td>4.14-5 Growth in population levels in the core area of the central campus would result in increased conflicts between bicyclists, pedestrians, and transit vehicles, causing increased congestion and safety problems.</td>
<td>PS</td>
<td>LS</td>
</tr>
</tbody>
</table>

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

Mitigation measures in the 2003 LRDP EIR that are applicable to the proposed project are presented below. Since these mitigation measures are already being carried out as part of implementation of the 2003 LRDP, they are considered part of the project description and will not be readopted in this Initial Study or Negative Declaration. Nothing in this Initial Study in any way alters the obligations of the campus to implement 2003 LRDP EIR mitigation measures.

<table>
<thead>
<tr>
<th>2003 LRDP EIR Mitigation Measures</th>
<th>Level of Significance</th>
<th>Level of Significance</th>
</tr>
</thead>
<tbody>
<tr>
<td>TRANSPORTATION, CIRCULATION, &amp; PARKING</td>
<td></td>
<td></td>
</tr>
<tr>
<td>4.14-5 UC Davis shall monitor core area pedestrian and bike activity and accidents. UC Davis shall improve bike and pedestrian facilities or alter transit operations to avoid increased bicycle accident rates or safety problems.</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

### 7.16.4 Environmental Checklist and Discussion

<table>
<thead>
<tr>
<th>TRANSPORTATION, CIRCULATION, &amp; PARKING</th>
<th>Potentially Significant Impact</th>
<th>Less than Significant with Project-level Mitigation</th>
<th>Impact adequately addressed in 2003 LRDP EIR</th>
<th>Less than Significant Impact</th>
<th>No Impact</th>
</tr>
</thead>
<tbody>
<tr>
<td>Would the project…</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>a) Conflict with an applicable plan, ordinance, or policy establishing measures of effectiveness for the performance of the circulation system, taking into account all modes of transportation including mass transit and non-motorized travel and relevant components of the circulation system, including but not limited to intersections, streets, highways and freeways, pedestrian and bicycle paths, and mass transit?</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>✔</td>
</tr>
<tr>
<td>b) Conflict with an applicable congestion management program, including, but not limited to level of service standards established by the county congestion management agency for designated roads and highways?</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>✔</td>
</tr>
</tbody>
</table>
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?

☐ ☐ ☐ ☐ ☒

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

☐ ☐ ☐ ☐ ☒

e) Result in inadequate emergency access?

☐ ☐ ☐ ☒ ☐

f) Conflict with adopted policies, plans, or programs regarding public transit, bicycle, or pedestrian facilities, or otherwise decrease the performance or safety of such facilities?

☐ ☐ ☐ ☐ ☒

a,b) The proposed project would not increase the student or employee population at UC Davis. The project is not expected to increase the volume of roadway usage and is not expected to result in changes to the performance of the circulation system. With no increase in the volumes of users, the project would have no effect on the efficiency of roadway or intersection operations. No impact would occur.

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 includes the roadway changes to move the core campus access gate from the current location west of California Avenue to a new location east of Kleiber Hall Drive. At the new Hutchison gate, the project would include construction of a visitor information area south of Hutchison Drive within Parking Lot 41. The information area would include an information kiosk, short-term parking for arriving visitors, and an area to allow cars and large trucks adequate turnaround space.

In addition, the project would provide enhanced pedestrian crossings at Hutchison Drive and Bioletti Drive and would modify the Bioletti intersection by installing a roundabout instead of the existing stop-signs. In addition, a short section of bike path would be removed at the Bioletti intersection. These project components are designed to improve safety in the Hutchison Drive corridor between Kleiber Hall Drive and California Avenue. The corridor experiences high volumes of bike, bus, pedestrian, service vehicle, and private vehicles. By moving the core campus access gate, the closed area of campus would be expanded and private automobiles would no longer have access to the congested area east of Kleiber Hall Drive.

The existing campus entry gate establishes a barrier restricting public vehicular access and allowing bicycles, transit vehicles, and service vehicles entrance to the closed core campus area. A new campus entry gate would be constructed on Hutchison Drive immediately west of Kleiber Hall Drive. The relocated gate would function similarly to the existing gate and would expand the closed campus area by eliminating private vehicle access to approximately 400 yards of Hutchison Drive between Kleiber Hall Drive and California Avenue. With gate relocation, the campus would reduce the amount of parking available for general campus access and would convert some parking to restricted uses such as service vehicle use and would remove approximately 100 parking spaces from use.

Operation of the new gate would be similar to the existing gate; however, private vehicles with special access needs would be allowed to pass through the new gate. For delivery and pickup of large items or campus users with disabilities, access would be allowed through the gate to utilize parking within the core campus. These accommodations could be made on a regular basis for visitors with
recurring access needs or could be made individually for visitors who arrive and have not pre-arranged for permission to pass through the gate. Technology such as telephone access, magnetic cards, key codes, or video conferencing could be employed to allow special access.

During construction of the temporary bookstore, the proposed roadway modifications would be implemented. Prior to the start of construction, an interim gate along Hutchison Drive at Bioletti Way or Kleiber Hall Drive would be installed so that private vehicles are restricted from proceeding to the congested portion of Hutchison Drive near the temporary bookstore construction site.

The 2003 LRDP EIR identified that growth under the 2003 LRDP would increase conflicts between bicyclists, pedestrians, and transit vehicles on the core campus, resulting in increased congestion and safety problems (Impact 4.14-5). LRDP Mitigation 4.14-5, included in the proposed project, requires UC Davis to continue to monitor pedestrian and bike activity and accidents on the core campus, and to improve bike and pedestrian facilities or alter transit operations to reduce accident rates or safety problems. The project components to modify the Hutchison Drive roadway are detailed improvements that help to implement LRDP Mitigation 4.14-5. These improvements are expected to improve congestion and safety problems and will be implemented prior to construction of the proposed temporary building.

The project also proposes to provide temporary loading for the Silo buildings along the south side of Hutchison Drive. This project element will introduce a new activity in the Hutchison Drive roadway that could affect operational safety. However, some of the deliveries are expected to occur during early morning hours prior to substantial bus and bike activity. In addition, the proposal to utilize the Hutchison roadway for loading and unloading will be a temporary six month process during the construction of the temporary building. Once the temporary building is constructed, the deliveries to the Silo buildings will be restored to the service drive west of the Silo buildings. The project is not expected to create dangerous conditions but it will add additional activity, on a six-month basis, to the Hutchison roadway. The potential impact to roadway safety would be less-than-significant.

e) Impacts related to emergency access are discussed in Section 7.7, Hazards and Hazardous Materials. Roadways would remain open to emergency vehicles. No impact would occur.

f) The project would result in no increase to the campus population and no increase to the demand for transit services. The project elements for roadway modifications are consistent with the campus plans for Hutchison Drive access and modifications. No impact would occur.

Summary

The proposed project would not exceed the levels of significance of transportation and circulation impacts previously addressed in the 2003 LRDP EIR, nor would it introduce any new significant impacts that were not previously addressed. Mitigation measure 4.14-5 from the 2003 LRDP EIR is relevant to the proposed project and reduces the significance of transportation and circulation impacts to the extent feasible. No new mitigation measures were identified that would further reduce the impacts of the project.
7.17 UTILITIES & SERVICE SYSTEMS

7.17.1 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, and natural gas. 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 2007-08, annual domestic water consumption was approximately 2,419 acre-feet and peak demand was 3,100 gpm.

- **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 average dry weather month. Recent upgrades have raised the capacity to 3.85 mgd average dry weather monthly. The maximum monthly in 2007 was 2.4 mgd.

- **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.
• **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. In 2007, the Davis campus sent approximately 8,100 tons of solid waste to the campus landfill per year (approximately 34 tons per working day). In addition, approximately 3,700 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 2007-08, approximately 14,300 tons of materials were diverted for recycling and reuse. The amount of materials diverted represents approximately 60 percent of the total waste generated on the Davis campus.

• **Electricity:** The main campus currently receives electricity from the Western Area Power Administration (WAPA) through PG&E transmission lines at the campus substation located south of I-80. The campus electrical system has an available capacity of 64.4 megawatts (MW). Annual electrical usage on campus in 2007-08 was approximately 235 million kilowatt-hours (KWh) per year.

• **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.

### 7.17.2 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.
7.17.3 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. The proposed project is within the scope of analysis in the 2003 LRDP EIR and no significant impacts identified in the 2003 LRDP EIR related to utilities and service systems are relevant to the proposed project.

7.17.4 Environmental Checklist and Discussion

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

a) The proposed project would not change the effluent volume at the campus wastewater treatment plant. Accordingly, the project would have no effect on the campus effort to meet the permit requirements of the Regional Water Quality Control Board. Relocation of the campus bookstore to a temporary location while the existing bookstore is under construction would change the location of the waste generation but would not increase the amount of waste. No impact would occur.
b, d, e) **Domestic Water Facilities**

The project would connect to the campus domestic water system at an existing water main located within the project site. The new connection would provide the same or less volume of water than the existing usage at the campus bookstore. The amount of water needed to serve the temporary bookstore would not create additional demand from the campus domestic water system and would not increase the amount of water extracted from the deep aquifer. No impact would occur.

**Utility Water Facilities**

The project would not connect to the campus utility water system. No impact would occur.

**Wastewater Facilities**

The proposed project would not change the effluent volume at the campus wastewater treatment plant. Relocation of the campus bookstore to a temporary location while the existing bookstore is under construction would change the location of the waste generation but would not increase the amount of waste. The project would require no upgrades or modifications to the campus wastewater collection and treatment system. No impact would occur.

c) The proposed project would replace the impervious surface of the existing campus parking lot with an impervious surface from the temporary bookstore building. The proposed project would not increase the amount of impervious surface and would not increase the volume of stormwater runoff entering the campus stormwater collection system. The project would connect to the campus stormwater system within the proposed project site and no upgrades or modifications to the stormwater system would be needed. No impact would occur.

f) The waste disposal needs of the proposed project would be served by the campus landfill. The proposed project would not increase the amount of solid waste generation because the existing campus bookstore would cease operations during the temporary bookstore operations. No impact would occur.

g) The proposed project would not generate any atypical solid waste. The proposed project would comply with all applicable statutes and regulations related to solid waste. Therefore, no impact would occur.

h,i) The proposed project would not connect to the campus chilled water or steam system. The project would connect to the campus electricity and natural gas system at a point within the proposed project. The project would not increase the amount of campus electricity or natural gas usage because the existing campus bookstore utilities would be turned off during operation of the temporary bookstore. The proposed project would result in no additional demand for service and would not contribute to potential future upgrades of the campus electricity or natural gas systems. No impact would occur.

**Summary**

The project will have no impact to utilities and service systems. No LRDP EIR Mitigation Measures or project-specific mitigation measures related to utilities and service systems are required.
### Mandatory Findings of Significance

<table>
<thead>
<tr>
<th>Would the project...</th>
<th>Potentially Significant Impact</th>
<th>Less than Significant with Project-level Mitigation</th>
<th>Impact adequately addressed in 2003 LRDP EIR</th>
<th>Less than Significant Impact</th>
<th>No Impact</th>
</tr>
</thead>
<tbody>
<tr>
<td>a)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Does the project have the potential to degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, reduce the number or restrict the range of a rare or endangered plant or animal or eliminate important examples of the major periods of California history or prehistory?</td>
<td>☐</td>
<td>☐</td>
<td>☑</td>
<td>☐</td>
</tr>
<tr>
<td>b)</td>
<td>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)?</td>
<td>☐</td>
<td>☐</td>
<td>☑</td>
<td>☐</td>
</tr>
<tr>
<td>c)</td>
<td>Does the project have environmental effects that will cause substantial adverse effects on human beings, either directly or indirectly?</td>
<td>☐</td>
<td>☐</td>
<td>☑</td>
<td>☐</td>
</tr>
</tbody>
</table>

---

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

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

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

___ Certificate of Fee Exemption

__X__ Pay Fee
9 REFERENCES


California Environmental Protection Agency (Cal EPA), Climate Action Team. 2006. Climate Action Team Report to Governor Schwarzenegger and the Legislature.

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


UC Davis. 2002. UC Davis Bicycle Plan.

UC Davis. 1997, October. UC Davis Water Management Plan.

UC Davis Agricultural Services. 2003. UC Davis Irrigation Database (from Irrigation Services Billing) for crops and aquaculture.


UC Davis ORMP. 2003c. Campus Water Balance.

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


10 AGENCIES & PERSONS CONSULTED

11 REPORT PREPARERS

Matt Dulcich, AICP, UC Davis Environmental Stewardship and Sustainability

A. Sidney England, UC Davis Assistant Vice Chancellor for Environmental Stewardship and Sustainability
APPENDIX A
PROPOSED NEGATIVE DECLARATION
PROPOSED NEGATIVE DECLARATION

Lead Agency: University of California

Project Proponent: University of California, Davis

Project Location: UC Davis core campus south of Hutchison Drive and west of the California Avenue intersection.

Project Description: The proposed project would utilize an existing parking lot in the core campus of UC Davis for the placement of a temporary building for campus bookstore sales. In addition, the project would make roadway changes to by moving the campus entry gate west to Kleiber Hall Drive, changing a stop-sign controlled intersection to a roundabout, and upgrading pedestrian connections.

Mitigation Measure: No project project-specific mitigation measures are proposed.

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 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.

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 December 16, 2010 to January 14, 2011. Comments received during the review period and responses to these comments will be presented in the final Tiered Initial Study.