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APPENDIX B. Mitigated Negative Declaration

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Figure 4. Aquatics Center Facility
The Draft Tiered Initial Study and proposed Mitigated Negative Declaration for the Aquatics Center project were circulated for public and agency review from July 2 to August 1, 2001. The attached Tiered Initial Study includes minor modifications and edits to the discussion provided in the draft document. As discussed further below, physical elements of the Aquatics Center project are changed from those identified in the Draft Tiered Initial Study. As a result, the magnitude of associated environmental effects would remain the same or would be somewhat reduced. No new significant information has been added, no new impacts have been identified, no new mitigation measures are required, and the levels of significance of impacts after mitigation remain unchanged.

This Tiered Initial Study reflects changes in the physical size of the proposed Aquatics Center facility. The primary change is the physical reduction of the aquatics support building by 2,048 gross square feet (1,740 assignable square feet). This reduction includes the loss of coaching offices, a team room, and an enclosed pool storage room, spaces that were identified in the Draft Tiered Initial Study. The table below compares the currently proposed physical elements of the project to the physical elements presented in the Draft Tiered Initial Study. The revised site plan, incorporating these changes, is presented in Figure 4. The magnitude of environmental effects identified in the Draft Tiered Initial Study would remain unchanged or would be somewhat reduced by these changes.

### Aquatics Center Physical Elements - Changes Since Publication of the Draft Tiered Initial Study

<table>
<thead>
<tr>
<th>Space</th>
<th>Draft Tiered Initial Study (July 2001)</th>
<th>Final Tiered Initial Study (October 2001)</th>
<th>Change</th>
</tr>
</thead>
<tbody>
<tr>
<td>Project Site</td>
<td>3.6 acres</td>
<td>3.6 acres</td>
<td>No Change</td>
</tr>
<tr>
<td>Aquatics Center Facility</td>
<td>46,208 gsf</td>
<td>40,220 gsf</td>
<td>- 2,648 gsf</td>
</tr>
<tr>
<td>Pool</td>
<td>16,020 gsf</td>
<td>16,080 gsf</td>
<td>+60 gsf</td>
</tr>
<tr>
<td>Deck and Warming Pool</td>
<td>15,900 gsf</td>
<td>15,900 gsf</td>
<td>No Change</td>
</tr>
<tr>
<td>Spectator Seating</td>
<td>3,000 gsf</td>
<td>3,000 gsf</td>
<td>No Change</td>
</tr>
<tr>
<td>Support Building</td>
<td>7,288 gsf / 6,195 asf</td>
<td>5,240 gsf / 4,455 asf</td>
<td>- 2,048 gsf / - 1,740 asf</td>
</tr>
<tr>
<td>Administration</td>
<td>400 asf</td>
<td>120 asf</td>
<td>- 280 asf</td>
</tr>
<tr>
<td>Coaching Offices</td>
<td>480 asf</td>
<td>--</td>
<td>- 480 asf</td>
</tr>
<tr>
<td>Restrooms/Lockers</td>
<td>2,295 asf</td>
<td>2,295 asf</td>
<td>No Change</td>
</tr>
<tr>
<td>Team Room</td>
<td>400 asf</td>
<td>--</td>
<td>- 400 asf</td>
</tr>
<tr>
<td>Sports Medicine</td>
<td>120 asf</td>
<td>120 asf</td>
<td>No Change</td>
</tr>
<tr>
<td>Pool Storage</td>
<td>700 asf</td>
<td>--</td>
<td>- 700 asf</td>
</tr>
<tr>
<td>Filtration Room</td>
<td>1,800 asf</td>
<td>1,800 asf</td>
<td>No Change</td>
</tr>
<tr>
<td>Director's Office</td>
<td>--</td>
<td>120 asf</td>
<td>+120 asf</td>
</tr>
<tr>
<td>Parking Area</td>
<td>1.3 acres</td>
<td>1.3 acres</td>
<td>No Change</td>
</tr>
<tr>
<td>Landscaped Grounds</td>
<td>1.3 acres</td>
<td>1.3 acres</td>
<td>No Change</td>
</tr>
</tbody>
</table>
This final document also updates the Draft Tiered Initial Study's discussion of projected population increases associated with currently proposed projects. The updated discussion reflects the recent approval of the Sciences Laboratory Building and Lecture Hall project and the Veterinary Medicine 3A project. In addition, the discussion incorporates the currently proposed conference center and hotel project, now named the Conference Center, Hotel, and Graduate School of Management Building project, which includes 30 more campus employees than the previously proposed Conference Center and Hotel and University Relations Building project. Table 2 - Projected Population Increases for Projects Currently Under Environmental Review reflects these changes.

This Initial Study also references the recently published 2001 City of Davis General Plan Update, which maintains the same population projection for the City of Davis planning area as the previous General Plan (see Item 1 - Land Use and Planning and Item 3 - Population and Housing of the attached Environmental Checklist).

This final document also includes an updated discussion on copper concentrations detected in effluent from the campus Wastewater Treatment Plant. Results from samples collected in June 2001 indicate that the campus was in compliance with permit limits for copper (see Item 9 - Hydrology and Water Quality of the attached Environmental Checklist).

To reflect a recent agreement between the campus and the Central Valley Regional Water Quality Control Board, and in response to a comment letter received from the Board (see Letter 1 in Section X - Comments and Responses to Comments), the discussion on construction storm water permitting has been updated (see Item 9a - Hydrology and Water Quality of the attached Environmental Checklist).

The project name in this document was also revised to maintain consistency with other project documentation; the project name identified in the Draft Tiered Initial Study was "Aquatic Center" and the current name is "Aquatics Center." In addition, this document includes two new sections: Section IX - Mitigation Monitoring Program and Section X - Comments and Responses to Comments.

The overall scope of the Aquatics Center project is substantially the same as that identified in the Draft Tiered Initial Study. As discussed above, no new significant information has been added, no new impacts have been identified, no new mitigation measures are required, and the levels of significance of impacts after mitigation remain unchanged. Therefore, consistent with Section 15073.5 of the CEQA Guidelines, recirculation of the Draft Tiered Initial Study is not necessary.
AQUATICS CENTER

ENVIRONMENTAL CHECKLIST FORM

UNIVERSITY OF CALIFORNIA October 25, 2001

CAMPUS: Davis

I. PROJECT INFORMATION

1. Project title: Aquatics Center

2. Project location: University of California, Davis
   Yolo County

3. Lead agency name and address: Office of Resource Management and Planning
   University of California
   One Shields Avenue
   376 Mrak Hall
   Davis, CA  95616

4. Project sponsor's name and address: See Item 3

5. Contact person and phone number: A. Sidney England
   Environmental Planner
   (530) 752-2432

6. Location of the administrative record for this project: See Item 3.

7. Identification of previous EIRs relied upon for tiering purposes (including all applicable
   LRDP and project EIRs) and address where a copy is available for inspection:

   This environmental analysis is tiered from the 1994 Long Range Development Plan (LRDP)
   Environmental Impact Report (EIR) (State Clearinghouse No. 94022005), as updated and
   revised by a number of subsequent documents (listed below). These documents are
   available for review during normal operating hours at the UC Davis Office of Resource
   Management and Planning, 376 Mrak Hall on the UC Davis campus; at Reserves in Shields
   Library on the UC Davis campus; at the Yolo County Public Library, 315 E. 14th Street,
   Davis; at the Vacaville Public Library, 1020 Ulatis Drive, Vacaville; and online at
   http://www.ormp.ucdavis.edu/environreview/ (technical appendices are not available
   online). Hereafter, reference to the 1994 LRDP EIR includes the 1994 LRDP EIR as revised
   by the documents listed below.

   Revisions to the 1994 LRDP EIR identified in subsequent environmental review documents
   are summarized in the list below. Appendix A of this Tiered Initial Study includes further
   information about the changes to the 1994 LRDP and LRDP EIR since original publication.
Wastewater Treatment Plant (WWTP) Replacement Project EIR (State Clearinghouse Nos. 95123027 and 96072024):

• Updated 1994 LRDP EIR analysis to reflect changes to land use designations presented in the 1994 LRDP (Section 4.6 of the WWTP Replacement Project Draft EIR).

• Identified the loss of an additional 20 acres of prime agricultural land and ruderal/annual grassland habitat over the amount identified in the 1994 LRDP EIR analysis and increased the magnitude of land use and biological resource impacts associated with this loss (Sections 4.4 and 4.6 of the WWTP Replacement Project Draft EIR, and Appendix G of the Final EIR).

• Reevaluated cumulative 1994 LRDP EIR Hydrology and Water Quality, Hazardous Materials and Public Safety, and Air Quality impacts (Sections 4.1, 4.3, and 4.3 of the Draft EIR).

1997-98 Major Capital Improvement Projects Supplemental EIR (SEIR) (State Clearinghouse No. 97122016):

• Updated 1994 LRDP EIR analysis to reflect changes to land use designations presented in the 1994 LRDP (Sections 5.3, 6.3, and 7.3 of the Draft SEIR).

• Identified the loss of an additional 20 acres of prime agricultural land and 31 acres of ruderal/annual grassland habitat over the amount identified in the 1994 LRDP EIR. To mitigate this loss, identified measure to redesignate 20 acres of prime farmland and ruderal/annual grassland habitat at the Russell Ranch from land designated as Academic and Administrative Low Density to Teaching and Research Fields (Sections 5.3, 5.5, 6.3, 6.5, 7.3, and 7.5 of the Draft SEIR).

• Identified the loss of 11 acres of ruderal/annual grassland habitat over the amount identified in the 1994 LRDP EIR analysis and increased the magnitude of biological resource impacts associated with this loss (Appendix A of the Final SEIR).

• Included project-specific mitigation measure to reduce the magnitude, but not the level of significance, of the cumulative impact on burrowing owl nesting habitat (Section 2 of the Draft SEIR).

• Included updated transportation and circulation analysis to assess a new traffic survey and the decision by the City of Davis not to expand the Richards Boulevard undercrossing from two to four lanes. Revised 1994 LRDP EIR transportation Mitigation Measure 4.3-1 (b) to account for the new traffic information (Section 8 of the Draft SEIR).

• Reevaluated cumulative air quality and noise impacts (Section 8 of the Draft SEIR).
• Center for the Arts Performance Hall and South Entry Roadway and Parking Improvements Tiered Initial Study and Mitigated Negative Declaration (State Clearinghouse No. 98092016):

  • Updated 1994 LRDP EIR analysis to reflect changes to land use designations presented in the 1994 LRDP (page 29 of the Initial Study).

  • Identified the loss of 8.5 acres of prime farmland and ruderal/annual grassland habitat over the amount assessed in the 1994 LRDP EIR. To mitigate this loss, identified measure to redesignate 8.5 acres of prime farmland and ruderal/annual grassland habitat designated as Support to Teaching and Research Fields (pages 29-30 and 60 of the Initial Study).

• USDA Western Human Nutrition Research Complex Tiered Initial Study and Mitigated Negative Declaration (State Clearinghouse No. 99092060):

  • Updated the 1994 LRDP EIR analysis to reflect changes to land use designations presented in the 1994 LRDP (pages 45-46 of the Initial Study).

  • Revised a project-specific mitigation measure presented in the 1997-98 Major Capital Improvement Projects SEIR that reduced the magnitude, but not the level of significance, of the cumulative impact on burrowing owl nesting habitat (page 65 of the Initial Study).

• Veterinary Medicine Laboratory and Equine Athletic Performance Laboratory Facilities Focused Tiered EIR (State Clearinghouse No. 2000022057):

  • Further updated the 1994 LRDP EIR cumulative transportation and circulation impact analysis to account for more accurate estimates of campus population growth in the Health Sciences District. The updated analysis identified that the intersection of Hutchison Drive and Health Sciences Drive would exceed level of service standards. Included a mitigation measure to reduce the impact at this intersection to a less-than-significant level (Section 3 of the Final EIR).
II. ENVIRONMENTAL REVIEW AND APPROVAL

INTRODUCTION

This environmental analysis is a Tiered Initial Study for the proposed Aquatics Center (proposed project). The environmental analysis for the proposed project is tiered from the UC Davis 1994 LRDP EIR in accordance with Section 15152 and 15168 of the California Environmental Quality Act (CEQA) Guidelines and Public Resource Code Section 21094. The 1994 LRDP EIR is a Program EIR, prepared pursuant to Section 15168 of the CEQA Guidelines (Title 14, California Code of Regulations, Sections 15000 et seq.). The 1994 LRDP EIR analyzed full implementation of uses and physical development proposed under the 1994 LRDP through the year 2005-06 and identified measures to mitigate the significant adverse project and cumulative impacts associated with that growth.

The CEQA concept of "tiering" refers to the coverage of general environmental matters in broad program-level EIRs, with subsequent focused environmental documents for individual projects that implement the program. This environmental document incorporates by reference the discussions in the 1994 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 task of preparing environmental documents on later parts of the program by incorporating by reference factors that apply to the program as a whole. Where an EIR has been prepared or certified for a program or plan, the environmental review for a later activity consistent with the program or plan should be limited to effects that were not analyzed as significant in the prior EIR or that are susceptible to substantial reduction or avoidance (CEQA Guidelines Section 15152(d)).

Accordingly, the tiering of the environmental analysis for the proposed project allows this Tiered Initial Study to rely on the 1994 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 1994 LRDP EIR for which there is no significant new information or change in circumstances that would require further analysis; and
- long-term cumulative impacts assessment.

The purpose of this Tiered Initial Study is to evaluate the potential environmental impacts of the project with respect to the 1994 LRDP EIR to determine what level of additional environmental
review, if any, is appropriate. Based on the analysis contained in this Tiered Initial Study, one of
the following determinations will be made:

- the project is exempt from CEQA;

- the project incrementally contributes to, but does not exceed, environmental impacts previously identified in the 1994 LRDP EIR, no additional mitigation measures are required, and preparation of Findings consistent with this determination is appropriate;

- the project would result in new impacts that were not previously identified in the 1994 LRDP EIR, but there is no substantial evidence that such new impacts may have a significant effect on the environment and preparation of a Negative Declaration is appropriate;

- the project would result in new potentially significant impacts that were not previously identified in the 1994 LRDP EIR, but proposed project-specific mitigation measures would reduce such impacts to a point where clearly no significant effects would occur and there is no substantial evidence that the project as mitigated may have a significant effect on the environment, and preparation of a Mitigated Negative Declaration is appropriate; or

- the project would result in new significant environmental impacts not previously identified in the LRDP EIR, and preparation of a tiered EIR is appropriate.

Mitigation measures identified in the 1994 LRDP EIR and adopted by the University that apply to the proposed project will be required to be implemented as part of the project. A project-specific mitigation measure for a new potentially significant impact that was not previously identified in the 1994 LRDP EIR will also be required as part of the proposed project.

**Scope of the Tiered Initial Study**

Based on the analysis presented in this Tiered Initial Study, it has been determined that the proposed project would not result in any potentially significant impacts that cannot be mitigated to less-than-significant levels or are not sufficiently addressed by the 1994 LRDP EIR. The analysis contained in this Tiered Initial Study concludes that the proposed project would result in the following categories of impacts, depending on the environmental issue involved: no impact; less-than-significant impact; less-than-significant impact with the incorporation of 1994 LRDP EIR or project-specific mitigation measures; or contribute to a significant unavoidable impact that was adequately analyzed in the 1994 LRDP EIR for which no new mitigation measures are available and no new analysis is proposed. The project would result in one new potentially significant impact that was not previously identified in the 1994 LRDP EIR, but a project-specific mitigation measure would reduce this impact to a less-than-significant level. The preparation of a Mitigated Negative Declaration is appropriate (the Mitigated Negative Declaration is presented in Appendix B).
Since none of the conditions described in CEQA or the CEQA Guidelines calling for preparation of a subsequent EIR have occurred, this Tiered Initial Study includes only minor technical changes or additions to the analysis set forth in the 1994 LRDP EIR. The analysis presented in this document does not raise important new issues about the significant effects on the environment analyzed in the 1994 LRDP EIR.

**PUBLIC AND AGENCY REVIEW**

The Draft Tiered Initial Study and proposed Mitigated Negative Declaration for the Aquatics Center project were circulated for public and agency review from July 2, 2001 to August 1, 2001. Copies of the Draft Tiered Initial Study were made available during normal operating hours at the UC Davis Office of Resource Management and Planning, 376 Mrak Hall on the UC Davis campus; at Reserves in Shields Library on the UC Davis campus; at the Yolo County Public Library, 315 E. 14th Street, Davis; at the Vacaville Public Library, 1020 Ulatis Drive, Vacaville; and online at http://www.ormp.ucdavis.edu/environreview/. Copies of the 1994 LRDP, 1994 LRDP EIR, WWTP Replacement Project EIR, 1997-98 Major Capital Improvement Projects SEIR, Center for the Arts Tiered Initial Study and Mitigated Negative Declaration, USDA Western Human Nutrition Research Center Tiered Initial Study and Mitigated Negative Declaration, and the Veterinary Medicine Laboratory and Equine Athletic Performance Laboratory Facility Tiered EIR were, and continue to be, available at these locations.

Comments on the Draft Tiered Initial Study were to be e-mailed to environreview@ucdavis.edu or sent to:

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

**Organization of the Tiered Initial Study**

This Tiered Initial Study is organized into the following sections.

**Section I - Project Information:** provides summary background information about the proposed project, including project location, lead agency, and contact information.

**Section II - Environmental Review and Approval:** includes a summary of the Tiered Initial Study's relationship to the 1994 LRDP EIR, the scope of the Tiered Initial Study, public and agency review information, and an overview of the document's organization.

**Section III - Project Description:** includes the description of the proposed project.
**Section IV - Consistency with the 1994 LRDP:** describes the consistency of the proposed project with the 1994 LRDP and 1994 LRDP EIR.

**Section V - Environmental Factors Potentially Affected:** identifies which environmental factors were determined to be a "Potentially Significant Impact" as indicated by the Tiered Environmental Checklist.

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

**Section VII - Evaluation of Environmental Impacts:** contains the Tiered Environmental Checklist form for each resource area. The checklist is used to assist in evaluating the potential environmental impacts of the proposed project with respect to the 1994 LRDP EIR. The checklist identifies potential project effects as follows: (1) new potentially significant project impacts that were not adequately analyzed in the 1994 LRDP EIR, or previously identified significant impacts for which new feasible mitigation measures are available; (2) new less-than-significant impacts with mitigation incorporated; (3) environmental impacts of the project that were adequately analyzed and mitigated in the 1994 LRDP EIR; (4) less-than-significant impacts; and (5) effects that would not result in any adverse environmental impact.

This section also contains an explanation of all checklist answers and recommended mitigation measures.

**Section VIII - Project-Specific Mitigation Measure:** identifies a Project-Specific Mitigation Measure that was not previously identified in the 1994 LRDP EIR.

**Section IX - Mitigation Monitoring Program:** presents the Mitigation Monitoring Program for implementing the Project-Specific Mitigation Measure identified in Section VIII.

**Section X - Comments and Responses to Comments:** presents comment letters received during the public and agency review period and responses to these comments.

**Section XI - References:** lists references used in the preparation of this report.

**Section XII - Agencies and Persons Consulted:** provides the names of individuals contacted in preparation of this document.

**Section XIII - Report Preparers:** lists the names of individuals involved in the preparation of this report.

**Appendix A - Amendments to the 1994 LRDP and Revisions to the 1994 LRDP EIR:** summarizes amendments to the 1994 LRDP and revisions to the 1994 LRDP EIR through May 2001.

**Appendix B - Mitigated Negative Declaration:** presents the Mitigated Negative Declaration for the project.
III. PROJECT DESCRIPTION

UC Davis

The 5,300 acre UC Davis campus (the 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, in general, is comprised of four campus units: the central campus, the south campus, the west campus, and Russell Ranch (see Figure 3-2, Regional and Local Setting, on page 3-5 of the 1994 LRDP Draft EIR). The "main campus" refers to the central, south, and west campus units, excluding Russell Ranch. Most of the academic and extracurricular activities occur within the central campus. The central campus is bounded approximately 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 1,590 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 acquired by the campus in 1990 and is intended for use in large-scale agricultural and environmental research and the study of sustainable agricultural practices. 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 on the west and northwest. In addition, UC Davis owns several buildings in Research Park, located in the City of Davis south of I-80.

PROJECT DESCRIPTION

The proposed project includes the construction and operation of an aquatic sports and recreation center and a parking area in the central campus, west of La Rue Road and east of East Health Sciences Drive (Figure 2). The proposed project would include approximately 3.6 acres and would consist of an approximately one acre Aquatics Center facility, an approximately 1.3 acre parking area, and approximately 1.3 acres of landscaped grounds (including hardscape and softscape). The new Aquatics Center facility would include a 65-meter long pool, a deck and warming pool, spectator seating, and a support building. The proposed parking area, located directly west of the Aquatics Center, would accommodate up to 100 vehicles. The Aquatics Center would supplement existing campus facilities to better meet the collective aquatic needs of the campus community, including intercollegiate athletics and recreation. In addition, the facility would supplement competitive aquatic programs of the surrounding community.

Project Site

The proposed Aquatics Center and new parking area would be constructed on approximately 3.6 acres of undeveloped land located directly west of La Rue Road and east of East Health Sciences Drive. An existing bike path currently crosses the proposed project site (see Figure 3). Surrounding land uses include Parking Lots 54 and 54a to the west, the Health Sciences District to
the southwest (including the Schools of Medicine and Veterinary Medicine), and undeveloped fields to the north and south.
The proposed Aquatics Center site is designated in the 1994 LRDP as Physical Education, Intercollegiate Athletics, and Recreation (PE/ICA/Recreation), a designation consistent with the proposed use. Part of the proposed parking area would be located on land designated in the 1994 LRDP as PE/ICA/Recreation, and part would be on land designated for a future road corridor (shown in Figure 3). The 1994 LRDP allows parking lots of less than 100 spaces to be subsumed within other land use categories. Surrounding 1994 LRDP land use designations include: PE/ICA/Recreation to the north, Academic and Administrative High Density to the west, Open Space Teaching/Research to the south, and Housing to the east.

Project Background

The Facilities and Campus Enhancement (FACE) Initiative was a funding mechanism proposed in 1998 that called for a student fee that would fund a variety of facilities and programs, including three new capital projects: an Activities and Recreation Complex (approved in January 2001), an Aquatics Center (the proposed project), and a Multi-use Stadium (will be submitted for approval in the future). The initiative also provided funding for a new Recruitment and Retention Complex, Recreation Hall improvements, enhancements to the Equestrian Complex, and increased funding for the Intramural Sports Program.

Undergraduate, graduate, and professional students approved the ballot initiative in February 1999 with 67 percent of the votes in favor. Law school students approved the initiative in a separate ballot with 68 percent of the votes in favor. The FACE Initiative had several guiding principals and assumptions, including:

- Fees associated with this initiative will not be collected until students paying the fees have the opportunity to benefit from new or enhanced facilities or programs.
- Student usage will be the first priority of the projects, with emphasis given to broad range student access, open recreation, and intramural activity.
- The fees will provide for an increase in campus-based financial aid for those students with the greatest financial need.
- Any field displaced by construction of new facilities will be replaced at a reasonable campus location consistent with the campus LRDP and paid for by project funds.

Project Need

One of the distinguishing features of UC Davis is the degree to which students participate in extracurricular activities, including sports and recreation. Existing UC Davis facilities for aquatic sports and recreation (including Hickey Gymnasium Pool and the Recreation Pool) cannot meet the demands of current enrollment. The proposed project would supplement existing facilities to better meet the needs of primary users (including intercollegiate athletic aquatic sports) and secondary users (including recreational swimmers in the campus community and City of Davis swimming programs).
Need of Users

Primary users of the new Aquatics Center facility would be UC Davis Intercollegiate Athletic aquatic sports teams, including the Men's and Women's Swimming, Diving, and Water Polo teams. UC Davis has built a strong reputation for excellence in the intercollegiate sports of swimming, diving, and water polo. In March 2000, UC Davis men's and women's swimming and diving teams both placed fourth at the National Collegiate Athletic Association (NCAA) Division II Swimming and Diving National Championships. These teams currently train in Hickey Gymnasium Pool, an inadequate training and competition facility, as discussed further below. The new facility would accommodate training and competition.

Secondary users of the new facility would include UC Davis staff and student recreational swimmers (lap and fitness swimmers) and the City of Davis' Aquadarts (youth swimmers) and Aquatic Masters (adult swimmers) programs. Recreational water sports have been completely eliminated at Hickey Pool in recent years, and the Recreation Pool only provides recreational swimming for the campus community during summer months. The City of Davis aquatic programs have expressed an interest in using the proposed facility because there is no pool with 50-meter lap lanes in the surrounding community.

Hickey Gymnasium Pool

Hickey Gymnasium and Hickey Pool, the facilities that currently accommodate UC Davis Intercollegiate Athletic aquatic sports teams, were built in 1938, when enrollment was less than 1,000 students. The pool (20 yards wide by 33 yards long) is currently scheduled daily from 5:30 AM to 10:15 PM. Because physical education classes have priority and are scheduled at irregular times during the week, Intercollegiate Athletic teams are often denied crucial practice time. Student athletes often practice very early, very late, or during scheduled classes, jeopardizing their academic performance. Because Hickey Gymnasium Pool does not have a 50-meter length (required for long course swimming competitions) and does not meet the NCAA standards for intercollegiate Water Polo, UC Davis must host most of its home events at off-campus facilities. Hickey Pool's bulkhead, required for the 25-meter course and used during home meets, often skews the timing of events, making the UC Davis campus an undesirable competition venue. In addition, Hickey Pool's size prohibits swimming and diving competitions from taking place simultaneously.

Since there is no warming pool on the Hickey Pool deck (necessary to keep divers warm between dives), a makeshift spa has been created by filling a cattle water trough with hot water. This solution does not allow water filtration, and water must be replaced several times a day.

Current locker space in Hickey Gymnasium is inadequate for several reasons. Not only are there not enough lockers in Hickey Gymnasium to accommodate all athletes, the women's locker room must be vacated on the days of home football games in order to accommodate visiting football teams. In addition, locker rooms are too small to hold team discussions.
Project Goals

The campus identified the following goals for the proposed Aquatics Center:

- Invest in UC Davis' aquatic sports reputation, assist recruitment and retention efforts, and help publicize aquatic programs.
- Provide an attractive gateway from the western edge of campus that is consistent with the overall visual message of the campus and relates to the City.
- Support a partnership with City Parks and Recreation Programs.
- Provide accessibility to and from other parts of campus.
- Provide an open design and include wood and natural light.
- Provide an object of pride and promote the strength of UC Davis' sports programs.
- Be unique to UC Davis and support its traditions (such as Aggie Pack, the UC Davis student spirit organization).
- Provide a facility that meets the needs expressed in the FACE Initiative approved by the Student Body and execute such delivery cost-efficiently.
- Design the facility to accommodate future demands.
- Provide a facility that will support intercollegiate Men's and Women's Swimming, Water Polo, and Diving sports teams; City of Davis Masters and Aquadarts programs; and student and staff lap swimming.
- Provide a facility that will supply: an aquatic venue without recreational slides, wading pools, etc.; appropriate seating and space to accommodate larger meets and the Aggie Pack; a pool with 50-meter lap lanes, a diving area, and two movable bulkheads; the capacity for simultaneous practices in order to ease the training schedule; a well-lit atmosphere during the evening; security; and sufficient locker rooms and accessible restrooms.
- Provide circulation to the facility that will: be clear and unrestricted; separate vehicular, pedestrian, and bike traffic; provide clear and separate access for utility and emergency vehicles; provide safe area for drop-off and queuing; and avoid unnecessary congestion along La Rue and Hutchison Drive.
- Protect swimmers from seasonal winds by massing the support facility or using wind-screening devices.
Project Elements

The proposed project would comprise approximately 3.6 acres and would consist of the approximately one acre Aquatics Center facility, an approximately 1.3 acre parking area with space for up to 100 vehicles, and approximately 1.3 acres of landscaped grounds (including softscape and hardscape). The Aquatics Center would be designed to fit within the financial constraints and programmatic intentions of the FACE funding and to allow for future expansion if and when additional funding is available. The proposed Aquatics Center would consist of a pool and deck, spectator seating, and an enclosed support building, as shown in Figure 4. The pool and deck would be below grade and would be bordered by the support building and spectator seating to the west, and by fencing to the north, east, and south. The Aquatics Center would also alleviate demand on existing campus aquatic facilities so they may better serve other users.

Pool and Deck

The open-air, 65-meter long pool (approximately 16,080 gsf) would be designed for maximum flexibility and to meet NCAA standards for long course swim meets, water polo, and diving. The pool would include a 50-meter lap lane area (seven feet deep) and a 15-meter diving area (13 feet deep). The pool would be constructed with two bulkheads to allow two 25-meter swimming events and diving to take place simultaneously. The diving area would include two 3-meter springboards and two 1-meter springboards. The pool's deck would be approximately 15,750 gsf and would provide access to a built-in warming pool (150 gsf) with an 8-person capacity. A small covered, unenclosed storage area for pool equipment would be provided on the deck.

Spectator Seating

Seating would be available on bleachers (3,000 gsf) for approximately 500 spectators.

Support Building

The 5,240 gsf (4,455 assignable square feet [asf]) enclosed support building, located to the west of the pool and deck area, would accommodate the following:

- Administration/Reception: A total of 120 asf would accommodate functions associated with facility management, including administrative office space, a reception area, and ticket sales.
- Men's Lockers/Showers/Toilets: A 1,110 asf area would include 66 team lockers, 30 day-use lockers, and restroom space for men. The area would be designed so that restrooms could be closed off from the locker room in order to accommodate spectators during special events.
- Women's Locker/Showers/Toilets: A 1,185 asf, area would include 66 team lockers, 30 day-use lockers, and restroom space for women. The area would be designed so that restrooms could be closed off from the locker room to accommodate spectators during special events.
• Sports Medicine/First Aid: One 120 asf room would be equipped with an ice machine and a training table to accommodate training and first-aid needs.

• Filtration room: One 1,800 asf area would house the pool filtration, chlorination, and water heating systems. Drive-up service access would be provided to the area.

• Director's Office: One 120 asf room would provide office space for the Aquatics Center's director.
Vacated Space

Intercollegiate Athletic aquatic sports teams would vacate Hickey Gymnasium and Hickey Pool for the new Aquatics Center facility. This would free Hickey Pool to better accommodate existing physical education classes. Locker room space vacated in Hickey Gymnasium would better accommodate existing Intercollegiate Athletic programs to relieve current overcrowding.

Population

The proposed project would add approximately two new employees, hired to oversee the Aquatics Center, to the campus population (Barnett 2001).

The proposed Aquatics Center would accommodate up to 500 spectators. The facility is expected to near or meet its capacity during large swimming and diving competitions, which would occur a few times per year. Smaller events would occur more frequently and generally on weekends (Barnett 2001).

Landscaping

The proposed project would include approximately 1.3 acres of ancillary grounds. A preliminary estimate assumes approximately half of this area would be hardscape and half would be softscape. However, an effort would be made to minimize impervious surfaces in landscape design. Hardscape areas consist of pedestrian walkways, bicycle paths, and borders around softscaped areas. Softscape areas would consist of appropriate plantings in terms of cost, durability, and aesthetics. The softscaped areas would provide guest and pedestrian gathering spaces and would reinforce pedestrian circulation paths. Trees would be planted near the Aquatics Center to provide a windbreak and near the parking area to provide at least 50 percent shade in 15 years. Landscaping and berms near the pool would be arranged to minimize off-site noise distractions. Storm water drainage would be channeled, where possible, through swales and over other pervious surfaces to filter runoff and maximize percolation.

Utilities and Infrastructure

The proposed project would require connections to campus utilities and infrastructure including domestic water, utility water, sanitary sewer, steam, storm drainage, electricity, and telecommunications. The proposed Aquatics Center would not connect to the campus chilled water system but would instead be cooled by air cooled chillers located outside of the building. The proposed project would not use natural gas. The capacities of existing utility systems are analyzed in the Utilities and Service Systems section of the attached Environmental Checklist (Section VII).

Domestic Water

Domestic water would be routed to the proposed Aquatics Center via a new extension connecting to the campus domestic water system at a point located west of the proposed site, near the southeastern corner of Parking Lot 54a. The domestic water flow rate serving the facility during
general operations would be a maximum of approximately 140 gallons per minute (gpm). However, to accommodate the backwash system for the pool filters that would occur once every 7 to 10 days, the system would be sized for a maximum capacity of 300 gpm.

Utility Water

Utility water for landscape irrigation would be supplied to the proposed Aquatics Center via a new extension connecting to the campus utility water system at a point located west of the proposed site, near the southeastern corner of Parking Lot 54a. The utility water flow rate serving the project would be a maximum of approximately 900 gpm.

Sewer

The proposed Aquatics Center would connect to the campus sanitary sewer system at a point located northeast of the proposed facility, near the bike tunnel under La Rue Road. The facility's gravity sewer system would be sized to handle the 300 gpm flow rate associated with filter backwash operations (that would occur every 7 to 10 days). However, general sewer service from the building would be a maximum of approximately 140 gpm.

Steam

Steam would be supplied to the proposed Aquatics Center via a new extension connecting to the campus steam system at a point located east of the proposed project site, east of Garrod Drive and south of La Rue Road. Central campus steam would be used to heat the proposed support building and pool.

Storm Drainage

Storm water runoff from the project site would drain to storm drain inlets connecting to the campus storm drainage system. The inlets are located east of the proposed project site and adjacent to the west side of La Rue Road.

Electricity

Electricity would be provided for the proposed project from the campus's electrical distribution system. The project would connect to the campus grid at a new pad-mounted transformer (preliminarily rated at 150 kVA) located adjacent and southwest of the proposed Aquatics Center site. Preliminary estimates show the project would have a peak demand of approximately 118 kVA.

A main electrical room in the Aquatics Center would contain a main power distribution panelboard. Emergency power would be provided for egress lighting and exit signs in offices and similar areas via integral battery packs. Wall-pack emergency light fixtures would be used in electrical, storage, and equipment rooms.

Telecommunications
The Aquatics Center would connect to an existing telecommunications line at a point located west and adjacent to the project site. Telephone lines, which will be made available when voice over fiber cable is supplied to buildings in the Health Sciences District, would be reallocated for the proposed project.

**Roadway and Parking Improvements**

The proposed parking area, located adjacent to the Aquatics Center, would add up to 100 spaces to the campus inventory. The parking area would also provide truck delivery space and loading areas next to the pool entrance to facilitate drop-off and pick-up of young swimmers. The parking area would be accessible from East Health Sciences Drive and would be intended to serve the Health Sciences District and Aquatics Center users. The lot would not necessarily provide all of the parking required for large swim meets, which would use a combination of visitor parking lots on campus. Construction of the parking area would involve grading and paving approximately 1.3 acres of land. The proposed project would not remove any existing parking.

The proposed parking area would be partially located on land designated in the 1994 LRDP for a future road corridor. The roadway was proposed to provide access to the Health Sciences District and directly connect SR 113 to South La Rue Road (see Figure 3). Construction of the proposed surface parking area would not physically preclude construction of the 1994 LRDP’s road corridor at some time in the future. The proposed Aquatics Center would face this road extension if it were constructed.

The Tercero Hall Bikeway (that connects the core campus to the Health Sciences District through a tunnel under La Rue Road) is currently aligned northeast to southwest (shown in Figure 3) through the proposed Aquatics Center site. During construction, bikes traveling between the Health Sciences District and the core campus would be detoured away from the project site onto the existing bicycle path located to the north. The Tercero Hall Bikeway would be realigned between La Rue Road and East Health Sciences Drive to an east to west alignment along the north side of the Aquatics Center and the new parking area (shown in Figure 2). This realigned bikeway would be operational during or soon after construction. The bicycle path would intersect with East Health Sciences Drive, which would connect bicycle access to the Health Sciences District. Parking for approximately 80 bicycles would be provided on the north side of the Aquatics Center, off the realigned bike path.

**Excavation and Excavated Materials**

The deck area would be constructed at approximately 3.5 feet below grade. A total of approximately 12,000 cubic yards of earth would be excavated for the pool and deck. Excavation activities would conform with recommendations from a Geotechnical Engineer and applicable local, state, and federal excavation and backfilling safety provisions. Some excavated materials would be used onsite to form berms under the bleachers. Remaining excavated material would most likely be used for other construction projects on campus. If other campus projects are not able to use all the material, remaining material would be removed to an off-campus location for use or disposal.
CONSTRUCTION SCHEDULE AND STAGING

The proposed project is scheduled for review by The Board of Regents of the University of California (The Regents) in September 2001. Construction is expected to begin in June 2002 and finish in June 2003. Construction staging and contractor parking for the proposed Aquatics Center would occur on the proposed parking area site from approximately June 2002 to March 2003. Construction staging and contractor parking for the proposed parking area would occur north of the site on undeveloped land from approximately March 2003 to September 2003.

PROJECT APPROVALS

As a public agency principally responsible for approving or carrying out the proposed project, the University of California is the Lead Agency under CEQA and is responsible for reviewing and certifying the adequacy of the environmental document and approving the proposed project. It is anticipated that The Regents will consider design approval of the proposed project in November 2001.
IV. CONSISTENCY WITH THE LRDP

In order to determine the project’s consistency with the 1994 LRDP and 1994 LRDP EIR, the following questions must be answered:

- Is the proposed project included in the scope of the development projected in the 1994 LRDP?
- Is the proposed location of the project in an area designated for this type of use in the 1994 LRDP?
- Are changes to campus population that would result from the proposed project included within the scope of the 1994 LRDP population projections?
- Are the objectives of the proposed project consistent with the objectives adopted for the 1994 LRDP?
- Is the proposed project within the scope of the cumulative analysis in the 1994 LRDP EIR?

The following discussion describes the proposed project’s relationship to development projections, population projections, land use designations, and objectives contained in the 1994 LRDP and the project’s consistency with each of these items. Appendix A summarizes the amendments to the 1994 LRDP and the revisions and updates to the 1994 LRDP EIR since original publication.

1994 LRDP SCOPE OF DEVELOPMENT

The 1994 LRDP anticipated 12 acres for new PE/ICA/Recreation facilities and 20 acres for new fields. The 1994 LRDP identified that the new PE/ICA/Recreation facilities could include a 50-meter swimming and diving complex (page 64 of the 1994 LRDP). To date, approximately 5.5 acres of new facilities (for the Activities and Recreation Center) have been approved for development under the 1994 LRDP. The proposed project, including approximately 2.3 acres directly associated with the Aquatics Center facility (including the facility and surrounding grounds, but not the parking area), would increase new PE/ICA/Recreation facility development under the 1994 LRDP to approximately 7.8 acres. This additional development would not exceed planned growth. Therefore, the proposed project would be consistent with development allowed under the 1994 LRDP.

1994 LRDP LAND USE DESIGNATION

The proposed Aquatics Center would be located on a site designated in the 1994 LRDP as PE/ICA/Recreation. This land use category (as described on page 46 of the 1994 LRDP) provides for both indoor and outdoor athletic facilities and fields. The proposed project includes construction of a pool and associated recreation support facilities. The proposed Aquatics Center facility would be consistent with the PE/ICA/Recreation land use designation identified in the 1994 LRDP.
The proposed parking area (with up to 100 spaces) would be located partially on land designated in the 1994 LRDP as PE/ICA/Recreation and partially on land designated for a future road corridor (see Figures 2 and 3). The 1994 LRDP indicated that parking lots under 100 spaces would be subsumed in other land use categories. Therefore, the parking area is consistent with the land uses for the site designated in the 1994 LRDP. The roadway was proposed to provide access to the Health Sciences District and directly connect SR 113 to South La Rue Road (see Figure 3). Construction of the proposed surface parking area would not physically preclude construction of the 1994 LRDP's road corridor at some time in the future. The proposed Aquatics Center would face this road extension if it were constructed.

1994 LRDP Population Projections

The on-campus population anticipated under the 1994 LRDP for 2005-06 is 38,630 (26,000 students and 12,630 faculty and staff) (see Table 1). The 1999-00 on-campus population estimate was 32,775 (22,887 students and 9,888 faculty and staff). Recently built and approved projects would bring this total to approximately 33,822 (23,205 students and 10,617 staff). The proposed project would contribute approximately two new campus employees and no new students. Population growth associated with the proposed project would not exceed population projections assumed in the 1994 LRDP EIR. The proposed project and other projects currently under consideration (the Segundo Improvements Project, the Veterinary Instructional Facility, the Conference Center, Hotel, and Graduate School of Management Building, and the CRPRC Improvements) would add approximately 461 new campus employees and 968 new students to this total (Table 2). This would also not exceed the on-campus population anticipated under the 1994 LRDP.

### TABLE 1. ESTIMATED AND PROJECTED CAMPUS POPULATION

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Students</td>
<td>21,060</td>
<td>22,887</td>
<td>+3,113</td>
<td>26,000</td>
</tr>
<tr>
<td>Faculty and Staff</td>
<td>9,550</td>
<td>9,888</td>
<td>+2,742</td>
<td>12,630</td>
</tr>
<tr>
<td>Total Population</td>
<td>30,610</td>
<td>32,775</td>
<td>+5,855</td>
<td>38,630</td>
</tr>
</tbody>
</table>

¹ Off-campus student population not counted in this total. Approximately 570 students are located at the UC Davis Medical Complex, Sacramento Campus, and an additional 280 students are enrolled elsewhere at other UC Davis affiliated facilities. Therefore, accounting for the off-campus student population, total UC Davis enrollment in 2005-06 will be 26,850.

² Includes faculty and staff located on the central, west, and south campus units, Russell Ranch, and at campus facilities in the City of Davis sphere of influence.

³ Base year for 1994 LRDP EIR analysis. Source: UC Davis 1994 LRDP EIR.

⁴ Source: UC Davis 2001a.

⁵ Projected 1994 LRDP growth and buildout. Source: UC Davis 1994 LRDP EIR.
**TABLE 2. PROJECTED POPULATION INCREASES FOR PROJECTS CURRENTLY UNDER ENVIRONMENTAL REVIEW**

<table>
<thead>
<tr>
<th>Program</th>
<th>Student Population</th>
<th>Faculty and Staff Population</th>
<th>Total On-Campus Population</th>
</tr>
</thead>
<tbody>
<tr>
<td>Estimated Campus Population Including Projects Built or Approved as of May, 2001</td>
<td>23,205</td>
<td>10,617</td>
<td>33,822</td>
</tr>
<tr>
<td>Aquatics Center</td>
<td>0</td>
<td>2</td>
<td>2</td>
</tr>
<tr>
<td>Segundo Improvements Project</td>
<td>400</td>
<td>64</td>
<td>464</td>
</tr>
<tr>
<td>Veterinary Medicine Instructional Facility</td>
<td>568</td>
<td>5</td>
<td>573</td>
</tr>
<tr>
<td>Conference Center, Hotel, and Graduate School of Management Building</td>
<td>0</td>
<td>375</td>
<td>375</td>
</tr>
<tr>
<td>California Regional Primate Research Complex Improvements</td>
<td>0</td>
<td>15</td>
<td>15</td>
</tr>
<tr>
<td>Total Proposed</td>
<td>968</td>
<td>461</td>
<td>1,429</td>
</tr>
<tr>
<td>Existing, Approved and Proposed Projects</td>
<td>24,173</td>
<td>11,078</td>
<td>35,251</td>
</tr>
<tr>
<td>Projections for 2005-06 (LRDP)</td>
<td>26,000</td>
<td>12,630</td>
<td>38,630</td>
</tr>
</tbody>
</table>
1994 LRDP Objectives

The purpose of the 1994 LRDP is to guide campus land use and development in response to projected population growth and the changing nature of academic programs. The 1994 LRDP responds to projected growth in the campus population by:

- providing new instructional space and classrooms required to serve the anticipated growth in student population,

- providing expanded instruction and research space projected for the biological sciences, agricultural sciences, physical sciences, and veterinary medicine, and

- providing flexibility for significant expansions in response to future academic missions.

In addition, the LRDP contains specific objectives that are of relevance to the proposed project, including:

The City. Establish shared planning objectives with the City of Davis. Focus on common strategies for transportation system improvements, student housing, and recreation. [Resource Objective, page 12 of the LRDP.]

Expand near Recreation Hall. Consolidate most new fields and facilities southwest of Recreation Hall to allow efficient and shared use. [Physical Education, Intercollegiate Athletics, and Recreation Objective, page 64 of the 1994 LRDP.]

Parking options. Supply parking through a combination of: 1) infill surface parking in the academic core, 2) additional parking structure(s) on the edge of the academic core, 3) peripheral surface parking adjacent to the perimeter road, and 4) parking for campus residents. [Transportation and Parking Objective, page 80 of the 1994 LRDP.]

Because there is no 50-meter pool in the surrounding community, the City of Davis (with active Aquadarts and Masters Swimming Programs) has expressed an interest in becoming a partner to support the proposed project. The proposed project would implement a common solution to recreation needs of the campus and the City, fulfilling "The City" Resource Objective.

The proposed project would construct a recreation facility southwest of the Recreation Hall to allow efficient and shared use, fulfilling "Expand near Recreation Hall" PE/ICA/Recreation Objective.

The project would construct up to 100 spaces in peripheral surface parking, fulfilling "Parking options" Parking Objective.

1994 LRDP EIR Cumulative Analyses

The 1994 LRDP EIR contained cumulative analyses for the projected buildout of the 1994 LRDP.
The cumulative context in the 1994 LRDP EIR varied depending on the nature of the issue being studied. Cumulative effects were classified by either natural resources boundaries (i.e., biological resources, hydrology, geology, and air quality); or by population growth and associated development within the City of Davis and Yolo and Solano counties (i.e., public and community services, transportation, hazardous materials, noise, aesthetics, and cultural resources). The cumulative impact analysis for each environmental issue in the EIR was defined based on the cumulative context that best defined the geographic extent of the possible cumulative effect (see Section 5.2, Cumulative Impacts, of the 1994 LRDP EIR).

The proposed project includes construction and operation of an Aquatics Center and a parking area. As discussed above, the proposed project is within the scope of development and population assumed in the 1994 LRDP EIR. Therefore, the proposed project incrementally contributes to, but does not exceed, the cumulative impact evaluation presented in the 1994 LRDP EIR, as revised.

The technical discussions in the Tiered Initial Study Environmental Checklist, attached hereto, conclude that the proposed project would:

- not contribute to significant and unavoidable cumulative impacts identified in the 1994 LRDP EIR related to loss of prime agricultural land (Item 2a), toxic air emissions (Item 6b, c, d), use and disposal of radioactive materials (Item 7 a, b), use and disposal of biohazardous materials (Item 7a, b), loss of valley elderberry longhorn beetle habitat (Item 8a);

- incrementally contribute to, but not exceed, significant and unavoidable impacts identified in the 1994 LRDP EIR related to intersection level of service (Item 4b), increased noise sources (Item 5a, c), construction air pollutants (Item 6b), criteria air emissions (Item 6b, c), use and disposal of hazardous materials (Item 7a, b), development on potentially contaminated sites (Item 7d), demand for emergency response (Item 7g), loss of ruderal/annual grassland (Item 8a), receiving water quality (Item 9a), groundwater recharge (Item 9b), demand for water from the deep aquifer (Item 9b), seismic effects (Item 10a), loss of cultural resources (Item 12b, d), loss of rural character (Item 13b, d), City of Davis fire protection services (Item 14a(ii)), City of Davis police protection services (Item 14 a(ii)), contribution of school-age students in the Davis Joint Unified School District (Item 14 a(iii)); and

- incrementally contribute to, but not exceed, less-than-significant cumulative impacts identified in the 1994 LRDP EIR related to carbon monoxide emissions (Item 6b, c), water demand from the shallow/intermediate aquifer (Item 9b), demand for parks and recreation (Item 14a(iv) and 15a), demand for electricity (Item 16h), wastewater capacity (Item 16a, b, e), and solid waste disposal capacity (Item 16f).

The campus is currently considering how it should plan to accommodate an additional 5,000 to 6,000 students by 2015 (the campus's share of the University of California system's projected growth). The campus's anticipated enrollment growth, at the rate of approximately 2.2 percent
annually up to a total of 30,000 to 31,000 students by 2015, is expected to significantly increase
the number of employees and the amount of facility construction on campus. A revised LRDP will
be prepared to identify the changes required to accommodate anticipated growth and an EIR will
be prepared to assess the environmental impacts of such changes. The revised LRDP and its EIR
are anticipated to be ready for The Regents review by spring 2003. To the extent that future
growth is not considered in the 1994 LRDP and/or associated physical changes to the environment
have not been considered in the 1994 LRDP EIR, additional environmental impacts could
conceivably occur. Currently, however, analysis of any such impacts would be speculative because
current planning efforts are preliminary in nature and constitute feasibility and planning studies, as
defined in the CEQA Guidelines Section 15262. Please visit the UC Davis Growth Planning
website for further information at http://growthplanning.ucdavis.edu/.
V. ENVIRONMENTAL FACTORS POTENTIALLY AFFECTED

The environmental factors checked below would be potentially affected by this project, involving at least one impact that is a “Potentially Significant Impact” as indicated by the checklist on the following pages.

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

Based on the analysis presented in this Tiered Initial Study, it has been determined that for all resource areas, the proposed project would not result in any significant impacts that can not be mitigated to a less-than-significant level or are not sufficiently addressed by the 1994 LRDP EIR, as revised. This Tiered Initial Study has concluded that the project would incrementally contribute to, but not exceed, certain significant impacts previously identified in the 1994 LRDP EIR, and that for such impacts, no new mitigation measures, other than those previously identified in the 1994 LRDP EIR, are required. The proposed project would result in one new potentially significant Biological Resource impact, but a proposed project-specific mitigation measure would reduce this impact to a less-than-significant level. Therefore, preparation of a Mitigated Negative Declaration is appropriate. The Mitigated Negative Declaration is presented in Appendix B of this document.
VI. DETERMINATION

Pursuant to Sections 15152 and 15168 of the CEQA Guidelines, this Tiered Initial Study has been prepared to evaluate the potential environmental impacts of the proposed project in relation to the programmatic environmental analysis contained in the 1994 LRDP EIR. On the basis of the evaluation that follows, I find that:

___ The proposed project is exempt from CEQA pursuant to the general exemption (CEQA Guidelines, 15061(b)(3)), a statutory exemption, and/or a categorical exemption, and that if a categorical exemption, none of the exceptions to the exemption apply. A NOTICE OF EXEMPTION will be prepared.

___ Pursuant to Section 15168(c)(2) of the CEQA Guidelines, the proposed project may incrementally contribute to, but will not exceed, the significant environmental impacts previously identified in the 1994 LRDP EIR, and the project will otherwise result in no new significant environmental impacts. Further, having been avoided or mitigated pursuant to the 1994 LRDP EIR, no new mitigation measures, other than those previously identified in the 1994 LRDP EIR, are required. FINDINGS consistent with this determination will be prepared.

___ The proposed project may incrementally contribute to, but will not exceed, significant environmental impacts previously identified in the 1994 LRDP EIR. Further, the proposed project will result in no new significant impacts other than those previously identified in the 1994 LRDP EIR. However, the project will have environmental impacts not previously addressed in the 1994 LRDP EIR, but there is no substantial evidence that such impacts may have a significant impact on the environment. No new mitigation measures, other than those previously identified in the 1994 LRDP EIR, are required. A NEGATIVE DECLARATION will be prepared.

X The proposed project may incrementally contribute to, but not exceed, certain significant cumulative impacts previously identified in the 1994 LRDP EIR, and that for such impacts, no new mitigation measures, other than those previously identified in the 1994 LRDP EIR, are required. In addition, the project may result in a potentially significant impact not previously identified in the 1994 LRDP EIR, but a proposed project specific mitigation measure would reduce the effect of such impact to a point that clearly no significant impact would occur. On the basis of the Tiered Initial Study and implementation of all proposed project specific mitigation measures, there is no substantial evidence that the project as mitigated may have a significant effect on the environment. A MITIGATED NEGATIVE DECLARATION will be prepared. (The Mitigated Negative Declaration is presented in Appendix B.)

___ The proposed project may incrementally contribute to, but will not exceed, certain significant environmental impacts previously identified in the 1994 LRDP EIR. For such impacts, no new mitigation measures, other than those previously identified in the 1994 LRDP EIR, are required and are incorporated by reference. Further, there is substantial evidence that the project may result in a significant environmental impact that was not previously identified in the 1994 LRDP EIR, and/or will exacerbate a significant environmental impact previously identified in the 1994 LRDP EIR. An Environmental Impact Report will be prepared that addresses the new impacts not previously identified in the 1994 LRDP EIR and supplements the 1994 LRDP EIR.

October 25, 2001
Date
John A. Meyer
Vice Chancellor - Resource Management and Planning
VII. EVALUATION OF ENVIRONMENTAL IMPACTS

INTRODUCTION

The Environmental Checklist form is used to assist in evaluating the potential environmental impacts of the proposed project with respect to the 1994 LRDP EIR. The checklist identifies potential project effects as follows:

(1) **Potentially Significant Impact**: An effect that is substantial based on significance criteria. If there are one or more “Potentially Significant Impact” entries in the checklist form, an EIR is required.

(2) **Less than significant with Mitigation Incorporated**: An effect that, with the incorporation of mitigation measures, is reduced from a “Potentially Significant Impact” to a “Less Than Significant Impact.” The Tiered Initial Study includes mitigation measures and briefly explains how these measures reduce the associated effect to a less-than-significant level.

(3) **Impact for which LRDP/Program EIR is Sufficient**: An effect that was adequately addressed and mitigated to the extent feasible in the 1994 LRDP EIR (the Program EIR).

(4) **Less than Significant Impact**: No significant impacts, only less-than-significant impacts, will result.

(5) **No Impact**: The project does not create an impact in the category.

Environmental impacts of the proposed project that are determined in this Tiered Initial Study to have been adequately analyzed and mitigated in the 1994 LRDP EIR generally fall into one of two general categories: (1) impacts that were determined to be less-than-significant after the implementation of mitigation measures identified in the 1994 LRDP EIR, and (2) impacts considered significant and unavoidable in the 1994 LRDP EIR. No further analysis is required for impacts within the first category since the 1994 LRDP EIR and associated mitigation measures would reduce project-level impacts to a less-than-significant level. Impacts identified as significant and unavoidable in the 1994 LRDP EIR include: (a) impacts identified as significant for some projects, but which would not be significant in relation to the proposed project; and (b) impacts that are significant on a cumulative level but not at a project level, for which the 1994 LRDP EIR fully addresses the cumulative impacts. The following resource discussions provide specific reasons for concluding that the 1994 LRDP EIR adequately analyzes the impacts of the proposed project.

Substantiation and clarification for each checklist response is also provided in the following resource discussions. Included in each discussion is a summary of relevant setting information and 1994 LRDP EIR impacts and mitigation measures that apply to the proposed project.
1. Land Use and Planning

Background

The 5,300 acre UC Davis campus, in general, is comprised of four campus units: the central campus, the south campus, the west campus, and Russell Ranch (see Figure 3-2, Regional and Local Setting, on page 3-5 of the 1994 LRDP Draft EIR). The 1994 LRDP designated land uses on campus including Academic and Administrative (High and Low Density); Support; Housing; Physical Education, Intercollegiate Athletics, and Recreation (PE/ICA/Recreation); Teaching and Research Fields; Open Space (Formal, Reserve, and Teaching/Research); Parking; Community Gardens; Commercial; and Enterprise Reserve. The approximately 3.6 acre proposed project site is partially designated as PE/ICA/Recreation and partially designated for a future road corridor in the 1994 LRDP. The site is currently an undeveloped open field. The PE/ICA/Recreation land use designation is defined in the 1994 LRDP as follows:

PE/ICA/Recreation: These uses are primarily located in the Central Campus and provide facilities for physical education, intercollegiate athletics, intramural sports, and general recreation. Specific facilities associated with this land use include Hickey Gym, the Recreational Hall and Recreational Swimming Pool and Lodge, and various outdoor intramural fields.

Road Corridor: The 1994 LRDP designated land for a roadway that would cross the proposed project site. The roadway was proposed to provide access to the Health Sciences District and directly connect SR 113 to South La Rue Road.

The 1994 LRDP projected development in the PE/ICA/Recreation areas of campus to consist of 12 acres of new facilities and 20 acres for new athletic fields. To date, 5.5 acres of new facilities for the UC Davis Activities and Recreation Center have been approved for development under the 1994 LRDP. If approved and constructed, the proposed project, including an approximately 2.3 acres directly associated with the Aquatics Center facility (including the facility and surrounding grounds, but not the parking area), would increase new PE/ICA/Recreation facility development under the 1994 LRDP to approximately 7.8 acres.

1994 LRDP EIR Standards of Significance

The environmental analysis in the 1994 LRDP EIR considered an impact to land use planning significant if planned growth would:

- propose uses that would conflict with locally adopted city or county planning policies; or

- propose uses that would be incompatible with adjacent uses and that would be considered a nuisance because the proposed use would (a) cause adjacent land uses to make extensive operational adjustments that would reduce the efficiency or effectiveness of the land uses, or (b) otherwise significantly adversely affect the efficiency, effectiveness, or productivity of the land uses.
1994 LRDP EIR Significant Impacts and Mitigation Measures

Impacts of campus growth through 2005-06 on land use and planning were evaluated in Section 4.1 (Land Use) of the 1994 LRDP Draft EIR. No significant land use and planning impacts were identified in the 1994 LRDP EIR. Land use impacts 4.1-1 and 4.1-5 in the 1994 LRDP EIR address the loss of prime farmland. Due to revisions to the CEQA guidelines since 1994, these impacts are currently addressed in the Environmental Checklist section titled “Agricultural Resources.” The 1994 LRDP EIR land use and planning analysis was updated to reflect land use designation changes in the WWTP Replacement Project EIR (Chapter 4.6 of the Draft EIR), the 1997-98 Major Capital Improvement Projects SEIR (Sections 5.3, 6.3, and 7.3 of the Draft SEIR), the Center for the Arts Performance Hall and South Entry Roadway and Parking Improvements Tiered Initial Study and Mitigated Negative Declaration (page 29 of the Initial Study), and the USDA Western Human Nutrition Research Complex Tiered Initial Study and Mitigated Negative Declaration (pages 45-46 of the Initial Study). Appendix A of this Initial Study summarizes updates and revisions to the 1994 LRDP EIR. No new land use and planning impacts were identified as a result of these updates. The proposed project is within the scope of the land use and planning analyses presented in these documents and there are no changed circumstances since the preparation of these documents that require reanalysis of cumulative impacts.

<table>
<thead>
<tr>
<th>Would the project:</th>
<th>Potentially Significant Impact</th>
<th>Less-than-significant with Mitigation Incorporated</th>
<th>Impact for which LRDP/Program EIR is Sufficient</th>
<th>Less-than-significant Impact</th>
<th>No Impact</th>
</tr>
</thead>
<tbody>
<tr>
<td>a) Physically divide an established community?</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☒</td>
</tr>
<tr>
<td>b) Conflict with any applicable land use plan, policy, or regulation of an agency with jurisdiction over the project (including, but not limited to the LRDP, general plan, specific plan, local coastal program, or zoning ordinance) adopted for the purpose of avoiding or mitigating an environmental effect?</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☒</td>
</tr>
<tr>
<td>c) Conflict with any applicable habitat conservation plan or natural community conservation plan?</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☒</td>
</tr>
<tr>
<td>d) Conflict with any designated adjacent existing or future land uses on or off-campus?</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☒</td>
</tr>
<tr>
<td>e) Exceed an applicable LRDP or Program EIR Standard of Significance?</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☒</td>
</tr>
</tbody>
</table>
Discussion

a) The proposed project would not physically divide a community. The proposal to develop an Aquatics Center and parking area west of La Rue Road and east of East Health Sciences Drive would not disrupt or separate land use activities currently taking place in the region. Nearby land uses include a bike path that crosses the proposed Aquatics Center site, Parking Lots 54 and 54a to the west, the Health Sciences District to the southwest, and undeveloped fields to the north and south (see Figure 3). The bicycle path would be rerouted to efficiently connect the Health Sciences District to the core campus. The proposed project would increase activity at the proposed site, but it would not physically separate activities and land uses. No impact would occur.

b) The proposed Aquatics Center would be located on land designated in the 1994 LRDP as PE/ICA/Recreation. The facility would be consistent with this land use designation. Approximately half of the proposed 100-space parking area would be located on land designated in the 1994 LRDP for a future road corridor, and the other half would be located on land designated in the 1994 LRDP for PE/ICA/Recreation (see Figures 2 and 3). The 1994 LRDP indicated that parking lots under 100 spaces would be subsumed in other land use categories Therefore, this land use is consistent with the 1994 LRDP and no impact would occur.

Part of the proposed parking area would fall on land designated in the 1994 LRDP for a future road corridor (see Figure 3). The parking area would not impact vehicle circulation or PE/ICA/Recreation operations on campus. In addition, the proposed parking area would not preclude construction of the 1994 LRDP proposed roadway at some time in the future. The proposed Aquatics Center would be oriented so that it would face this roadway if it were constructed.

The proposed project is located in the Davis Planning Area shown on the City of Davis General Plan. Although the University of California is exempt from local plans, policies, and zoning regulations, it is campus policy to cooperate with the general plans and land use policies of the City of Davis and Solano and Yolo Counties. The 1994 LRDP Draft EIR includes relevant policies and goals from the City of Davis and Counties of Solano and Yolo General Plans on pages 4.1-25 through 4.1-27. The 1987 City of Davis General Plan was updated in May 2001. The proposed project would not conflict with the updated City of Davis General Plan or the General Plans for the Counties of Solano and Yolo. Accordingly, no impact would occur.

c) The proposed site is a vacant, previously undeveloped field. The project site is not included in any conservation plan and therefore would not conflict with any applicable habitat conservation plan or natural communities’ conservation plan land use designation. No impact is anticipated.

d) The project would be located on the central campus and would not conflict with off-campus land uses. The proposed parking area would fall on land designated in the 1994 LRDP for a
AQUATICS CENTER

The proposed project would not impact other adjacent land uses. La Rue Road, a major component of the central campus automobile circulation system, is located adjacent and east of the proposed project site. The roadway would not provide access to the proposed project. A field designated in the 1994 LRDP as Housing that is currently used as pasture land by the campus dairy is located further east of the project site. The proposed project would not conflict with the current or planned land use of this field because La Rue Road would provide a separation. The proposed project would not affect undeveloped open land located adjacent and north of the proposed project site that is designated in the 1994 LRDP for PE/ICA/Recreation. The proposed project would also not affect undeveloped open land located adjacent and south of the proposed project site that is designated in the 1994 LRDP for an Open Space Reserve. The Health Sciences District is located southwest of the proposed project on land designated as High Density Academic and Administrative. The proposed Aquatics Center would be approximately 300 feet from MED SCI I C, the closest academic building, and no conflicts are expected. No further impact would occur and no other mitigation is required.

e) The standards of significance for land use and planning that were used in the preparation of the 1994 LRDP EIR are presented earlier in this section. These standards are consistent with the land use and planning questions in the current CEQA Environmental Checklist. Based on the discussion presented above, the proposed project would not exceed the standards of significance identified in the 1994 LRDP EIR. No impact would occur.

Summary

The 1994 LRDP EIR did not identify any significant impacts that are currently categorized as land use and planning. The proposed project would not result in any significant land use and planning impacts.
2. Agricultural Resources

Background

The campus includes land designated by the State Department of Conservation as Prime Farmland primarily in the west campus, south campus, Russell Ranch and a small portion of the central campus (see Figure 4.1-5 on page 4.1-30 of the 1994 LRDP Draft EIR).

1994 LRDP EIR Standards of Significance

The environmental analysis in the 1994 LRDP EIR considered an impact to agricultural resources significant if campus or regional growth would:

- propose uses that would convert or cause the conversion of Prime Farmland (as defined by the State Department of Conservation) to non-agricultural uses or cancel or cause the cancellation of Williamson Act contracts; or
- propose uses that would impair the agricultural productivity of prime agricultural land.

1994 LRDP EIR Significant Impacts and Mitigation Measures

Impacts of campus growth through 2005-06 on agricultural resources were addressed in Section 4.1 (Land Use) of the 1994 LRDP Draft EIR. Cumulative impacts on agricultural resources were reevaluated in the WWTP Replacement Project EIR, and agricultural resource impacts were revised to account for the loss of additional prime farmland not previously assessed in the 1994 LRDP EIR (Appendix G of the Final EIR). Both the 1997-98 Major Capital Improvement Projects SEIR and the Center for the Arts Performance Hall and South Entry Roadway and Parking Improvements Tiered Initial Study and Mitigated Negative Declaration identified losses of prime farmland over the amount assessed in the 1994 LRDP. However, these projects included measures to mitigate the impact on agricultural resources to a less-than-significant level (Appendix A of the Final SEIR, and pages 29-30 and 64 of the Initial Study). Appendix A of this document summarizes updates and revisions to the 1994 LRDP EIR. The proposed project is within the scope of the agricultural resource analysis presented in the 1994 LRDP EIR, as reevaluated and revised in subsequent documents. There are no changed circumstances since the preparation of these documents that require reanalysis of cumulative impacts. There are no significant agricultural resources impacts related to the proposed project.
**AGRICULTURAL RESOURCES**

<table>
<thead>
<tr>
<th>Would the project:</th>
<th>Potentially Significant Impact</th>
<th>Less Than Significant with Mitigation Incorporated</th>
<th>Impact for which LRDP/Program EIR is Sufficient</th>
<th>Less Than Significant Impact</th>
<th>No Impact</th>
</tr>
</thead>
<tbody>
<tr>
<td>a) Convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland), as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to non-agricultural use?</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<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>
<tr>
<td>d) Exceed an applicable LRDP or Program EIR Standard of Significance?</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☒</td>
</tr>
</tbody>
</table>

**Discussion**

a) The proposed 3.6 acre project site is designated as 'Other Land' by the State of California Department of Conservation on the Yolo and Solano Counties Important Farmland Map shown in Figure 4.1-5 of the 1994 LRDP EIR. The category of Other Land applies to land not meeting the soil type and agricultural productivity factors used to rank the importance of California farmland. The proposed project would not convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance as identified by the State of California Department of Conservation. No impact would occur.

b) No Williamson Act contracts exist on campus. In addition, the proposed project site is designated as Other Land by the State of California Department of Conservation and as PE/ICA/Recreation in the 1994 LRDP. The proposed project would not conflict with either an existing zoning for agricultural use or a Williamson Act contract and no impact would occur.

c) The project site is not located on agricultural land and is not situated adjacent to agricultural lands. Implementation of the proposed project would not result in the conversion of farmland to non-agricultural uses, and no impact would occur.

d) Standards of significance for agriculture resources impacts that were used in preparation of the 1994 LRDP EIR are presented earlier in this section. These standards are consistent with the
agricultural resources questions in the current CEQA Environmental Checklist. Based on the discussion presented above, the proposed project would not exceed the standards of significance identified in the 1994 LRDP EIR and would not result in new significant impacts related to agriculture resources that were not previously analyzed in the 1994 LRDP EIR and subsequent documents. Since the project would not result in the loss of farmland, no impact would occur.

Summary

The proposed project would not result in new or significant agriculture resources impacts that have not already been adequately assessed in the 1994 LRDP EIR.
3. Population and Housing

Background

The campus population consists of students, faculty, and staff. Current and projected campus population figures are presented in Table 1 of this Tiered Initial Study. Increased population growth on campus would also result in growth in the City of Davis. The increased population attributed to UC Davis is assumed to be included in the population projections adopted by the City of Davis General Plan.

The campus maintains a policy to house all freshman who wish to live on campus and the 1994 LRDP includes a goal to provide housing for 25 percent of enrollment. Recently completed student housing projects on the campus include the Primero Grove Apartments and the Colleges at La Rue. UC Davis also provides on-campus family housing (Solano Park, Orchard Park, and Russell Park) and faculty and staff housing (Aggie Village).

1994 LRDP EIR Standards of Significance

The environmental analysis in the 1994 LRDP EIR considered an impact to population and housing significant if campus or regional growth would:

- induce substantial growth or concentration of population;
- displace a large number of people; or
- conflict with the housing and population projections and policies set forth in the City of Davis General Plan.

1994 LRDP EIR Significant Impacts and Mitigation Measures

Impacts of campus growth through 2005-06 on population and housing issues were addressed in Section 4.2 of the 1994 LRDP Draft EIR. No significant population or housing impacts were identified in the 1994 LRDP EIR or subsequent documents. The proposed project is within the scope of the population and housing analysis presented in the 1994 LRDP EIR, and there are no changed circumstances since the preparation of this document that require reanalysis of the cumulative impacts.
<table>
<thead>
<tr>
<th>Would the project:</th>
<th>Potentially Significant Impact</th>
<th>Less Than Significant with Mitigation Incorporated</th>
<th>Impact for which LRDP/Program EIR is Sufficient</th>
<th>Less Than Significant Impact</th>
<th>No Impact</th>
</tr>
</thead>
<tbody>
<tr>
<td>a) Cumulatively exceed 1994 LRDP campus population projections?</td>
<td>□</td>
<td>□</td>
<td>□</td>
<td>□</td>
<td>□</td>
</tr>
<tr>
<td>b) 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>c) Displace substantial numbers of people and/or existing housing, necessitating the construction of replacement housing elsewhere?</td>
<td>□</td>
<td>□</td>
<td>□</td>
<td>□</td>
<td>□</td>
</tr>
<tr>
<td>d) Conflict with the population projections or housing policies set forth in the City of Davis General Plan?</td>
<td>□</td>
<td>□</td>
<td>□</td>
<td>□</td>
<td>□</td>
</tr>
<tr>
<td>e) Exceed an applicable LRDP or Program EIR Standard of Significance?</td>
<td>□</td>
<td>□</td>
<td>□</td>
<td>□</td>
<td>□</td>
</tr>
</tbody>
</table>

**Discussion**

a) As discussed in Section IV and shown in Table 1, the recent population estimate (from 1999-2000) for campus faculty, staff, and students is 32,775 (22,887 students and 9,888 faculty and staff). Projected buildout presented in the 1994 LRDP for year 2005-06 is 38,630 (26,000 students and 12,630 faculty and staff).

The proposed project would contribute approximately two new campus employees and no new students. With the proposed project and recently approved projects, the total staff population for the campus would be approximately 11,209 (see Table 2). The addition of two employees associated with the proposed project would not exceed campus population projections in the 1994 LRDP. No impact would occur.

b) The proposed project would contribute approximately two new campus employees. The addition of two employees associated with the proposed project would not exceed campus population projections in the 1994 LRDP. The Aquatics Center would be served by minor utility extensions that would not induce growth in the area. The proposed parking lot (with up to 100 spaces) would accommodate parking for the Health Sciences District and the Aquatics Center, but would not induce growth in the area. No impact would occur.
c) The project site is not currently designated for housing, nor does it include any existing housing facilities. In addition, the proposed project would not necessitate the construction of replacement housing due to the displacement of people, because it would only relocate operations currently occurring on campus in Hickey Gymnasium. Therefore, the proposed project would not impact or displace existing housing or require the construction of replacement housing elsewhere, and no impact would occur.

d) According to the 1994 LRDP EIR, buildout of the 1994 LRDP could add approximately 8,000 residents, including students, faculty and staff, and their dependents to the City of Davis by 2005-06. The 1994 LRDP EIR considered campus growth a component of buildout under the 1987 City of Davis General Plan, which projected population in the City of Davis planning area would reach 75,000 by 2010. The City updated its 1987 General Plan in May 2001. The plan maintains the projection that the City of Davis planning area will reach 75,000 by 2010. As described on page 4.2-19 of the 1994 LRDP Draft EIR:

> Growth projections for the City of Davis are based upon a buildout of land uses designated by the City of Davis General Plan. Although these projections do not specifically account for additional growth from the campus or other employers in the Davis area, the growth of the campus and the resultant indirect growth in the City of Davis is considered to be a portion of the 75,000 target population. Because the 1994 LRDP is not considered to expand the projected City of Davis year 2010 population, the 1994 LRDP is not considered to conflict with the population projections and policies of the City of Davis General Plan.

Implementation of the proposed project would add approximately two new employees to the campus, which would contribute to the growth of the campus population. This increase in population is within the population projections in the 1994 LRDP (see discussion under Section III, Consistency with 1994 LRDP and LRDP EIR).

Because the proposed project is consistent with growth projected under the 1994 LRDP, and the 1994 LRDP does not conflict with the population projections or housing policies of the City of Davis General Plan, the proposed project would not conflict with population projections or housing policies of the City of Davis General Plan. Therefore, no impact would occur.

e) Standards of significance for population and housing impacts that were used in preparation of the 1994 LRDP EIR are presented earlier in this section. These standards are consistent with the population and housing questions in the current CEQA Environmental Checklist. Based on the discussion presented above, the proposed project would not exceed the standards of significance identified in the 1994 LRDP EIR and would not result in new significant impacts related to population and housing that were not previously analyzed in the 1994 LRDP EIR. No impact would occur.

Summary

The proposed project would not result in new or significant population and housing impacts that have not already been adequately assessed in the 1994 LRDP EIR.
4. TRANSPORTATION/CIRCULATION

Background

Regional roadway access to the campus and the City of Davis is provided primarily by I-80 and SR 113. Access to the campus from the City of Davis is provided primarily from A Street, B Street, First Street, and Russell Boulevard. On campus, the major element of the central campus roadway system is the Loop Road System, which encircles academic and administrative uses. Inside the loop, general motor vehicle access is either prohibited or limited to specific destinations, with through traffic eliminated. The Loop Road System consists of Russell Boulevard, A Street, Old Davis Road, California Avenue and La Rue Road. Access to and from the central campus and the west campus is provided primarily by Hutchison Drive and Russell Boulevard. Access to and from the central campus and the south campus is provided primarily by Old Davis Road. Access to and from Russell Ranch is provided by Russell Boulevard.

Parking, bicycle paths, and transit service are provided throughout the campus. Parking and bicycle paths are concentrated on the core of the central campus. Figure 3-8 on page 3-18 of the 1994 LRDP Draft EIR depicts major parking areas and roadways.

1994 LRDP EIR Standards of Significance

The environmental analysis in the 1994 LRDP EIR considered an impact to transportation/circulation significant if campus or regional growth would:

- result in LOS for roadways within the City of Davis and the central campus of LOS “D” for existing roadways and LOS “C” for new roadways;
- result in LOS for County roadways of LOS “C”;
- result in LOS for I-80 of LOS “E”;  
- result in LOS for SR 113 of LOS “D”; 
- result in disruption to existing patterns of pedestrian and bicycle circulation, including the effects of congestion and unsafe conditions, and/or result in new uses which would create demand for bicycle and pedestrian travel without appropriate facilities; 
- result in disruption to the provision of transit services, including making transit safe, and/or result in demands for transit services which are not satisfied as part of the project or a known plan; 
- result in an increase in winter parking utilization over 90 percent on the Central Campus, Medical Sciences Complex, and/or major facilities of the West and South Campuses;
- result in the elimination of existing parking and increases in the projected utilization rate over 85 percent without permitting adequate time (usually 24 months) to implement a parking solution (to campus construction standards); or
- require additional parking and result in an increase in the utilization rate over 90 percent, unless decreases in projected campus parking demand are expected to substantially counteract this trend.

1994 LRDP EIR Significant Impacts and Mitigation Measures

Impacts of campus growth through 2005-06 on transportation and circulation were evaluated in Section 4.3 of the 1994 LRDP Draft EIR. The 1997-98 Major Capital Improvements Projects SEIR updated the 1994 LRDP EIR traffic analysis and revised 1994 LRDP EIR Mitigation Measure 4.3-1 (Section 8 of the Draft SEIR). The Veterinary Medicine Laboratory and Equine Athletic Performance Laboratory Facilities Focused Tiered EIR further updated the 1994 LRDP EIR transportation and circulation analysis and included a project-specific mitigation measure to reduce an identified impact (identified as 1994 LRDP EIR Mitigation Measure 4.3-1 (b) (f)) (Section 3 of the Final Veterinary Medicine Laboratory and Equine Athletic Performance Laboratory Facilities Focused Tiered EIR). Appendix A in this Initial Study presents further information on revisions to the 1994 LRDP EIR.

Significant impacts identified in the 1994 LRDP EIR that are relevant to the proposed project are presented in the following table. The levels of significance before and after application of mitigation measures identified in the 1994 LRDP EIR, the 1997-98 Major Capital Improvements Projects SEIR, and the Veterinary Medicine Laboratory and Equine Athletic Performance Laboratory Facilities Focused Tiered EIR are also presented. The proposed project is within the scope of the analysis presented in the 1994 LRDP EIR as updated in subsequent documents, and there are no changed circumstances since the preparation of these documents that require reanalysis of the cumulative impacts. Please note that 1994 LRDP Impact 4.3-1 includes mitigation measures to reduce the impact to a less-than-significant level. However, this impact was identified as significant and unavoidable because the University of California could not guarantee implementation of the mitigation measure because it falls within other jurisdictions to enforce and monitor.
<table>
<thead>
<tr>
<th>LRDP EIR IMPACT</th>
<th>Level of Significance Prior to Mitigation</th>
<th>Level of Significance After/With Mitigation</th>
</tr>
</thead>
<tbody>
<tr>
<td>4.3-1</td>
<td>SU</td>
<td>SU</td>
</tr>
<tr>
<td>4.3-2</td>
<td>S</td>
<td>LS</td>
</tr>
<tr>
<td>4.3-5</td>
<td>S</td>
<td>LS</td>
</tr>
<tr>
<td>4.3-6</td>
<td>S</td>
<td>LS</td>
</tr>
</tbody>
</table>

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

Mitigation measures in the 1994 LRDP EIR, as updated by the 1997-98 Major Capital Improvement Projects SEIR (revised Mitigation Measure 4.3-1) and the Veterinary Medicine Laboratory and Equine Athletic Performance Laboratory Facilities Focused Tiered EIR (included a mitigation measure identified as 1994 LRDP EIR Mitigation Measure 4.3-1 (b) (f)), which are applicable to the proposed project and that will be required as part of project implementation include the following:

- **LRDP EIR Mitigation Measure 4.3-1(a)** - The campus shall continue to actively pursue a program of Transportation System Management (TSM) strategies to reduce reliance on travel to and from campus by private automobile, particularly single-occupant peak period travel. As described in the Setting section, the campus currently has an extensive TSM program. TSM strategies include the development of a comprehensive bicycle circulation network, including a bicycle/pedestrian precinct in core area of Central Campus; increased parking fees; transit planning and subsidies; carpool and vanpool matching service, and development and incentive program; campus shuttle systems, including shuttles to UC Davis Medical Center in Sacramento and UC Berkeley, public awareness programs, park and ride lot identification, and telecommuting.

- **LRDP EIR Mitigation Measure 4.3-1(b)** - In cooperation with other responsible jurisdictions, the campus shall monitor a.m. and p.m. peak hour traffic operations at critical intersections in the campus vicinity on a regular basis (at least every three years). To the extent that TSM measures are successful, some roadway improvements may be avoided. Based upon the existing campus mode share and trip generation rates assumed in this analysis, the following physical improvements are intended to reduce the magnitude of this impact.

  (a) Realign Old Davis Road as shown on the LRDP and reconstruct the intersection of Old Davis and California Avenue. Provide separate right and left turn lanes on the California Avenue approach and a separate left turn lane on the eastbound Old
Davis Road approach and install a traffic signal. The realignment will extend to the intersection of Old Davis Road and A Street.

(b) At the intersection of I-80 Eastbound Ramps and Richards Boulevard, add an additional turn lane on the ramp approach to the intersection, to provide a left turn lane, combined right and left turn lane, and a right turn lane.

(c) Restripe the southbound Research Park Drive approach to the intersection with Richards Boulevard/Cowell Boulevard to provide a combined through/left turn lane and a separate exclusive right turn lane.

(d) Signalize the intersection of First and B Streets.

(e) Widen the eastbound Olive Drive approach to the intersection of Richards Boulevard and Olive Drive, to provide a right turn lane, combined right turn and through lane, and a left turn lane.

(f) The campus will monitor traffic volumes at the Hutchison Drive and Health Sciences Drive intersection every three years. If and when signalization is warranted based on traffic volumes, the campus will install a new traffic signal at this location.

• **LRDP EIR Mitigation Measure 4.3-2** - On a continuous basis, through implementation of the 1994 LRDP, the campus shall regularly monitor and document pedestrian and bicycle activity in the core area of the Central Campus. If the increased activity indicates a possible disruption in patterns of circulation, or congested or unsafe conditions, plans shall be developed and implemented to provide additional pedestrian and bicycle facilities, such as widenings, new facilities, separation of bicycles and pedestrians, extension of the bicycle/pedestrian precinct, and bicycle parking facilities, in response to this increased activity. The campus shall also continue its current studies of transit operations within the core area, to investigate the ability to minimize conflicts with transit vehicles without substantially reducing the desirability of transit services. The results of the studies shall be documented, and shall include specific measures to lessen transit conflicts, if any. If the studies show an increase in transit conflicts, some or all of the recommended measures to reduce such conflicts shall be implemented.

• **LRDP EIR Mitigation Measure 4.3-5** - The campus shall continue to support public transportation services, and will work with the City and other agencies to implement increased transit services in response to evolving campus needs. Such increased services would include improved Unitrans terminal facilities to accommodate increased ridership, developing new Unitrans routes and schedules to more effectively serve travelers, and improved coordination with other transit providers and modes of travel.

• **LRDP EIR Mitigation Measure 4.3-6** - The campus shall continue to actively pursue TSM strategies to reduce automobile travel and parking demand. The campus shall review individual projects under the 1994 LRDP to determine the adequacy of available parking. Additional parking shall be provided if it is determined that:
(a) the winter parking utilization rate is over 90 percent in the Central Campus, Medical Sciences Complex, or major facilities on the West and South Campus;

(b) the project would eliminate existing parking and increase the projected utilization rate by more than 85 percent without permitting adequate time (usually 24 months) to implement a parking solution; or

(c) the project would require additional parking due to projected population growth and increase the utilization rate over 90 percent, unless decreases in projected parking demand are expected to substantially counteract this trend.

Mitigation measures listed above are incorporated into the proposed project, and the proposed project as mitigated is evaluated in the checklist below.

<table>
<thead>
<tr>
<th>TRANSPORTATION/ CIRCULATION</th>
<th>Potentially Significant Impact</th>
<th>Less Than Significant with Mitigation Incorporated</th>
<th>Impact for which LRDP/ Program EIR is Sufficient</th>
<th>Less Than Significant Impact</th>
<th>No Impact</th>
</tr>
</thead>
<tbody>
<tr>
<td>Would the project:</td>
<td></td>
<td></td>
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<td></td>
</tr>
<tr>
<td>a)  Cause an increase in traffic that is substantial in relation to the existing traffic load and capacity of the street system (i.e., result in a substantial increase in either the number of vehicle trips, the volume to capacity ratio on roads, or congestion at intersections)?</td>
<td>□</td>
<td>□</td>
<td>■</td>
<td>□</td>
<td>□</td>
</tr>
<tr>
<td>b)  Exceed, either individually or cumulatively, a level of service standard established by the county congestion management agency for designated roads or highways?</td>
<td>□</td>
<td>□</td>
<td>■</td>
<td>□</td>
<td>□</td>
</tr>
<tr>
<td>c)  Result in a change in air traffic patterns, including either an increase in traffic levels or a change in location that results in substantial safety risks?</td>
<td>□</td>
<td>□</td>
<td>□</td>
<td>□</td>
<td>□</td>
</tr>
<tr>
<td>d)  Substantially increase hazards due to a design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?</td>
<td>□</td>
<td>□</td>
<td>□</td>
<td>□</td>
<td>□</td>
</tr>
<tr>
<td>e)  Result in inadequate emergency access?</td>
<td>□</td>
<td>□</td>
<td>□</td>
<td>□</td>
<td>□</td>
</tr>
<tr>
<td>f)  Result in inadequate parking capacity on campus?</td>
<td>□</td>
<td>□</td>
<td>■</td>
<td>□</td>
<td>□</td>
</tr>
</tbody>
</table>
Would the project:

<table>
<thead>
<tr>
<th>Item</th>
<th>Potentially Significant Impact</th>
<th>Less Than Significant with Mitigation Incorporated</th>
<th>Impact for which LRDP/Program EIR is Sufficient</th>
<th>Less Than Significant Impact</th>
<th>No Impact</th>
</tr>
</thead>
<tbody>
<tr>
<td>g) Conflict with applicable policies, plans, or programs supporting alternative transportation (e.g., bus turnouts, bicycle racks)?</td>
<td>[ ]</td>
<td>[ ]</td>
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<td>[ ]</td>
</tr>
<tr>
<td>h) Increased pedestrian and bicycle traffic in areas which may not have adequate facilities for these modes of travel</td>
<td>[ ]</td>
<td>[ ]</td>
<td>[ ]</td>
<td>[ ]</td>
<td>[ ]</td>
</tr>
<tr>
<td>i) Increased conflict between bicyclists, pedestrians, and transit vehicles, causing increased congestion and safety problems?</td>
<td>[ ]</td>
<td>[ ]</td>
<td>[ ]</td>
<td>[ ]</td>
<td>[ ]</td>
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<tr>
<td>j) Increased demand for transit services?</td>
<td>[ ]</td>
<td>[ ]</td>
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</tr>
<tr>
<td>k) Exceed an applicable LRDP or Program EIR Standard of Significance?</td>
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</tbody>
</table>

Discussion

a,b) Access to the proposed Aquatics Center located northwest of the Health Sciences District would be primarily from SR 113, Huthison Drive, West Health Sciences Drive, and East Health Sciences Drive. Construction and operation of the proposed Aquatics Center would contribute traffic to these roadways. Substantial new development, with a corresponding increase of approximately 1,200 new students and 750 new staff members, is planned within the Health Sciences District in upcoming years. Details of planned growth in the Health Sciences District are summarized in the Traffic and Circulation Section of the 2000 UC Davis Veterinary Medicine Laboratory and Equine Athletic Performance Laboratory Facilities Draft Focused Tiered EIR.

The cumulative transportation effects of refined 1994 LRDP growth projections (including new development in the Health Sciences District) were analyzed in a May 2000 traffic study (DKS 2000). This transportation and circulation analysis determined that four intersections would exceed LOS standards under the cumulative scenario:

- Richards Boulevard and First Street (LOS F during the a.m. and p.m. peak hours)
- Richards Boulevard and Olive Drive (LOS F during the a.m. and p.m. peak hours)
- Richards Boulevard and I-80 Eastbound ramps (LOS E during a.m. peak hour and LOS F during the p.m. peak hour)
- Health Sciences Drive and Hutchison Drive (LOS F during the p.m. peak hour)

All of these intersections except the intersection of Health Sciences Drive and Hutchison Drive
were previously analyzed in the 1997-98 Major Capital Improvements Project SEIR. With projected growth in the Health Sciences District, the intersection of Health Sciences Drive and Hutchison Drive would experience a LOS F during the p.m. peak hour due to delays associated with unsignalized left turns exiting the Health Sciences District (from Health Sciences Drive onto Hutchison Drive). Winter 2001 traffic counts show that this intersection currently operates at a LOS A during the a.m. peak hour and at a LOS C during the p.m. peak hour (Fehr & Peers 2001).

The Veterinary Medicine Laboratory and Equine Athletic Performance Laboratory Facilities Final Tiered EIR introduced a mitigation measure (identified as 1994 LRDP EIR Mitigation Measure 4.3-1[b] [f]) to reduce the LOS impact at the intersection of Health Sciences Drive and Hutchison Drive to a less-than-significant level. This mitigation measure ensures regular monitoring of the Hutchison Drive and Health Sciences Drive intersection and requires the installation of traffic signals when needed based on traffic volumes. After the installation of traffic signals, the intersection of Health Science Drive and Hutchison Drive is projected to operate at an acceptable LOS (LOS C).

Because the Aquatics Center is within the growth projected under the 1994 LRDP, it was included in the May 2000 cumulative traffic analysis. However, the analysis did not include the specific location of the Aquatics Center, and therefore did not assess the project's influence on the intersection of Health Sciences Drive and Hutchison Drive. Although specific effects of the project were not assessed in the traffic analysis, continued implementation of Mitigation Measure 4.3-1(b) (f), incorporated as part of the proposed project, would ensure that an adequate level of service is maintained during construction and operation of the proposed project. No further mitigation is required. Transportation demands associated with construction and operation of the proposed project are discussed further below.

Construction

Construction of the proposed Aquatics Center is expected to occur from June 2002 to June 2003, concurrent with the construction of recently approved projects within the Health Sciences District. On the average, construction of the proposed project would generate approximately 40 trips to and from the site per day. This would contribute a small volume of construction traffic over a relatively short-term period and would not result in a significant impact.

Operation

Operation of the proposed Aquatics Center is not expected to contribute significant traffic during the morning or afternoon peak hours. The small number of staff at the Aquatics Center facility (two) would not generate significant traffic on nearby roadways. The varied scheduling and small number of vehicle trips associated with team training would also not generate significant traffic on local roadways during peak hours. The Aquatics Center would provide capacity during competition events for 500 spectators, but only a few weekend competitions would meet or near this capacity each year. Smaller meets would occur during evenings and on weekends more frequently throughout the year. Off-peak impacts associated with competitions would be within roadway capacity levels based on the assumption that existing facilities contain sufficient capacity to meet off-peak demand. This assumption is considered
accurate and conservative based on the traffic data collection from the revised 1994 LRDP EIR. This data collection included 24-hour traffic counts in 15-minute intervals and concluded that the 7 to 9 AM and 4 to 6 PM peak commuter hours were the most critical time periods for operation of the motorized roadway system.

c) The proposed project would not result in a change to air traffic patterns or increase in air traffic levels. The UC Davis campus airport, located approximately one mile to the west, is the closest airport to the proposed Aquatics Center. The proposed project is not within the operations area of the airport and would not pose any restrictions to the existing operations of the airport. No impact would occur.

d) The proposed Aquatics Center parking lot, bike connections, and pedestrian walkways would be designed in accordance with recognized guidelines and standards, such as those promulgated by the campus, the federal government, and the State of California. The project would be designed for safe operations, including pedestrian and bicycle use. The Tercero Hall Bikeway that currently crosses the site and connects the core campus to the Health Sciences District would be realigned to an east to west alignment along the north side of the Aquatics Center and the new parking area (shown in Figure 2). Before this realigned path is operational, bikes traveling between the core campus and the Health Sciences District would be detoured away from the proposed project site onto the existing bicycle path located to the north. This detour would be clearly marked. The project would not introduce new safety hazards related to incompatible uses, such as farm equipment. Implementation of the proposed project would not result in any design features or incompatible uses that would result in a transportation safety hazard. No impact would occur.

e) The location and design of the project would allow adequate emergency and general access by all modes. The project would not eliminate or impede access to any existing uses. Vehicular, automobile, bicycle, and pedestrian connections would continue to be provided from the project to adjacent uses and the overall campus transportation system. Fire and emergency access would be designed to meet campus standards. No impact would occur.

f) The proposed project would not result in inadequate parking on campus. The project would construct a parking area between the Aquatics Center and Parking Lot 54a. The parking lot would add up to 100 spaces to the campus inventory and would serve the Health Sciences District and users of the Aquatics Center. The lot would not necessarily serve the parking requirements of all swim meets, which would use a combination of visitor parking lots on campus. Large swim and diving competitions are expected to occur a few times per year on weekends. Smaller competitions would be more frequent and would occur on evenings and weekends.

The 1994 LRDP EIR identified that population growth associated with development of the 1994 LRDP could increase parking demand (Impact 4.3-6). Mitigation Measure 4.3-6 from the 1994 LRDP EIR, incorporated into the proposed project, states that the campus will provide additional parking in the central campus when the winter parking utilization rate is over 90 percent. The winter, 2001 parking utilization survey shows that the adjacent Parking Lot 54 and 54a operate at 77 and 66 percent utilization, respectively. Central campus parking has an overall utilization rate of approximately 84 percent (UC Davis 2001b). Continued compliance
with Mitigation Measure 4.3-6 would ensure the impact on parking capacity would be less-than-significant.

g) The campus and City of Davis have encouraged bicycle travel through various programs and facilities. In addition, the campus and the City have been cooperating in a joint TSM effort to maintain and improve the existing non-automotive mode share. Among the strategies being used to reduce single-occupancy automobile trips are the establishment of a comprehensive bicycle and pedestrian circulation network; implementation of parking fees; transit planning and subsidies; promotion of carpool, vanpool, and park and ride; rideshare programs and incentives; operation of shuttle bus systems; encouragement of telecommuting; and institution of public awareness programs. The proposed project would not conflict with any of these strategies or other applicable policies, plans, or programs supporting alternative transportation. Therefore, no impact would occur.

h) Pedestrian and bicycle traffic to and from the Aquatics Center would be served by adequate facilities during construction and operation of the proposed project. The Tercero Hall Bikeway, traversing the site with a northeast to the southwest alignment, connects the core campus to the Health Sciences District and provides bicycle and pedestrian access to the site. The Bikeway's tunnel under La Rue Road would not be altered by the proposed project. The proposed project would realign the Bikeway between La Rue Road and East Health Sciences Drive to an east to west alignment along the north side of the Aquatics Center and the new parking area (shown in Figure 2). Before the realigned bicycle path is operational, access between the core campus and the Health Sciences District would be provided via a clearly marked detour along the bicycle path to the north (which intersects with the tunnel under La Rue Road). The low volume of bike traffic currently in this area of campus indicates that increased bicycle traffic generated by the proposed project would be adequately accommodated by existing and proposed modified facilities. 1994 LRDP EIR Mitigation Measure 4.3-2, incorporated into the proposed project, identifies strategies for providing adequate pedestrian and bicycle facilities. With continued compliance with Mitigation Measure 4.3-2, this impact would be less-than-significant.

i) The proposed project site would include adequate design measures to safely accommodate pedestrian and bicycle traffic as described above. Bicycle parking would be provided on the north side of the Aquatics Center while pedestrian access would be from the west. This configuration would relieve potential bicycle and pedestrian conflicts associated with the new facility. In addition, the low volume of pedestrians and bikes in this area of campus currently indicates that increased bicycle and pedestrian use generated by the proposed project would not introduce significant conflicts. As a component of the 1994 LRDP, this project would cumulatively contribute to increased conflicts between bicyclists, pedestrians, and transit vehicles occurring in the core area of the central campus (Impact 4.3-2). To reduce these conflicts, 1994 LRDP EIR Mitigation Measure 4.3-2 is incorporated into the proposed project. With continued compliance with mitigation measure 4.3-2, this impact would be less-than-significant.

j) The campus has implemented several measures to support public transportation services, such as discounted transit passes, subsidized services, expanded peak service, and additional buses
on existing routes. The proposed project, which would add approximately two employees to the campus population, would be adequately served by the existing and planned expansions of public transportation services on campus. Increased transit demand caused by cumulative growth from the 1994 LRDP was identified in the 1994 LRDP EIR as a significant impact (Impact 4.3-5). This impact is mitigated to a less-than-significant level through the adoption of Mitigation Measure 4.3-5, incorporated as part of this project. This mitigation measure provides for transit improvements to meet future demand for services. Continued implementation of Mitigation Measure 4.3-5 would ensure adequate transit services and mitigation of this impact to a less-than-significant level.

k) Standards of significance for transportation/circulation impacts that were used in preparation of the 1994 LRDP EIR are presented earlier in this section. These standards are consistent with the transportation/traffic questions in the current Environmental Checklist. As discussed above, with the incorporation of relevant 1994 LRDP EIR Mitigation Measures, the proposed project would not exceed the standards of significance identified in the 1994 LRDP EIR and would not result in new significant impacts related to transportation/circulation that were not previously analyzed in the 1994 LRDP EIR.

Summary

Mitigation measures 4.3-1, 4.3-2, 4.3-5, and 4.3-6 from the 1994 LRDP EIR, as updated and revised, are incorporated into the proposed project in order to reduce avoidable potential impacts to a less-than-significant level. The proposed project would not result in new or significant transportation and circulation impacts that have not already been adequately assessed in the 1994 LRDP EIR.
5. Noise

Background

The primary source of noise on and off campus is vehicle noise from roads and highways (I-80, SR 113, and local and regional roads) and freight and Amtrak trains using the Union Pacific (formerly Southern Pacific) railroad line. Aviation traffic also adds to the ambient noise levels, originating in the local area from the campus Airport and Yolo County Airport.

Modeled noise levels along local and regional roadways for the LRDP EIR show day-night sound levels ($L_{dn}$) ranging from as low as 56 A-weighted decibels (dBA) along County Road 32 at Russell Ranch to 76 dBA at 100 feet from the centerline of I-80 between SR 113 and Russell Boulevard. Measurements of sound levels ($L_{eq}$), taken from acoustical studies performed between 1987 and 1993 at and near the campus range from 43 dBA to 66 dBA $L_{eq}$. The higher noise levels measured were generally near busy roadways or sports fields (while in use). Measurements performed in 1993 for the 1994 LRDP were consistent with this range, with the exception of a few measurements at relatively quiet locations (all away from roadways) that were below 40 dBA $L_{eq}$.

The proposed project site is within the 60-65 Community Noise Equivalent Level (CNEL) contour shown on the 1987 City of Davis General Plan 2010 noise level projection map, included as Figure 4.4-6 of the 1994 LRDP EIR. The noise sources creating this contour are primarily SR 113 and I-80. The 1994 LRDP EIR used the State of California General Plan land use noise compatibility guidelines to evaluate land use/noise compatibility for proposed land uses on campus. These guidelines are provided in Figure 4.4-1 of the 1994 LRDP EIR and indicate that water based recreation uses are acceptable within noise contours up to 70 CNEL.

1994 LRDP EIR Standards of Significance

For the 1994 LRDP EIR, the State of California, Solano County, Yolo County, City of Davis, and the UC CEQA noise elements and/or guidelines were reviewed. The State of California and the UC CEQA noise guidelines do not have specific exterior noise levels, standards or laws. The only numerical guidance that exists is the State of California published general plan guidelines for preparing county and city General Plan Noise Elements. In the absence of other numerical guidance for determining significance, these State of California general plan guidelines are used as the standards of significance for noise impacts on the campus. Solano County, Yolo County, and the City of Davis general plan guidelines and ordinances are used as the standards of significance for noise impacts within Solano County, Yolo County, and the City of Davis jurisdictions, respectively. The environmental analysis in the 1994 LRDP EIR considered a noise impact significant if campus or regional growth would:

- cause substantial construction-related short-term noise level increases on the campus, in Yolo County or in Solano County that would disturb or interfere with nearby noise-sensitive uses or exceed the City of Davis Noise Ordinance for receptors in the City of Davis. Such noise-sensitive uses include off-campus residences, campus housing, and high and low density academic and administrative facilities; or
substantially increase the ambient noise levels for adjoining areas by 5 dBA during project operation, or cause noise levels to exceed normally acceptable levels as defined by the State of California General Plan Noise Element guidelines for receptors on the campus, Solano County General Plan guidelines for receptors off-campus within Solano County, Yolo County General Plan guidelines for receptors off-campus within Yolo County, City of Davis General Plan guidelines for receptors off-campus within Davis, or Cal OSHA standards.

Generally, construction-related short-term noise level effects on less noise-sensitive uses, such as teaching/research fields, support services, athletic facilities, open space areas, parking lots, and commercial areas, were not considered significant because construction noise is temporary and these less sensitive activities can continue with minimal disturbance.

**1994 LRDP EIR Significant Impacts and Mitigation Measures**

Significant noise-related impacts identified in the 1994 LRDP EIR that are relevant to the proposed project are presented in the following table. The levels of significance before and after application of mitigation measures, as identified in the 1994 LRDP EIR, are also presented in the table. Impacts of campus growth through year 2005-06 on noise were addressed in Section 4.4 of the 1994 LRDP EIR. Cumulative noise impacts were reevaluated in the 1997-98 Major Capital Improvement Projects SEIR but no changes were made to the 1994 LRDP EIR impacts or mitigation measures (Section 8 of the Draft Supplemental 1997-98 Major Capital Improvement Projects SEIR). The proposed project is within the scope of the analysis presented in the 1994 LRDP EIR as reevaluated in the 1997-98 SEIR and there are no changed circumstances since the preparation of these documents that require reanalysis of the cumulative impacts. Please note that cumulative regional impact 4.4-4 included mitigation measures to reduce the impact to a less-than-significant level. However, this impact was identified as significant and unavoidable because the University of California could not guarantee implementation of 1994 LRDP EIR Mitigation Measure 4.4-4(c), which is not within the jurisdiction of the University to enforce and monitor.

<table>
<thead>
<tr>
<th>LRDP EIR IMPACT</th>
<th>Level of Significance Prior to Mitigation</th>
<th>Level of Significance after/with Mitigation</th>
</tr>
</thead>
<tbody>
<tr>
<td>4.4-1 Development allowed under the 1994 LRDP would cause temporary increases in indoor and outdoor noise levels due to demolition, earthmoving and general construction activities.</td>
<td>S</td>
<td>LS</td>
</tr>
<tr>
<td>4.4-3 Occupants in structures developed under the 1994 LRDP could be exposed to significant noise levels from traffic, railroad, or other sources.</td>
<td>S</td>
<td>LS</td>
</tr>
<tr>
<td>4.4-4 Development allowed under the 1994 LRDP, in conjunction with cumulative growth in the Davis area, would result in increased traffic and other noise sources which could expose people and structures on- and off-campus to significant cumulative noise levels.</td>
<td>SU</td>
<td>SU</td>
</tr>
</tbody>
</table>

*Levels of Significance: SU = Significant and Unavoidable; PS = Potentially Significant; S = Significant; LS = Less than Significant*
Mitigation measures in the LRDP EIR that are applicable to the proposed project and will be required as part of project implementation include the following:

- **LRDP EIR Mitigation Measure 4.4-1** - For projects determined to have the potential to significantly affect nearby sensitive receptors, the campus shall include in all construction contracts one or more of the following noise reduction measures:
  
  (a) Construction activities that would impact sensitive receptors in the City of Davis and campus residences shall be limited to the hours between 7:00 A.M. and 7:00 P.M. on weekdays and 8:00 A.M. to 8:00 P.M. on weekends;
  
  (b) Stationary equipment shall be placed to direct emitted noise away from sensitive noise receptors or placed within a noise attenuating structure;
  
  (c) If feasible, stockpiling and vehicle staging areas shall be located at least 100 feet from occupied academic, administrative, and residential areas;
  
  (d) The loudest construction activities, such as demolition, shall be scheduled, if feasible, during summer, Thanksgiving, winter, and spring breaks when fewer people would be disturbed by construction noise;
  
  (e) Potentially affected academic, administrative, and residential areas shall be informed by letter a week before the start of each construction, demolition, or grading operation; and
  
  (f) Construction equipment shall be properly outfitted and maintained with noise reduction devices to minimize construction-generated noise. Significant noise-generating construction equipment shall be shielded by noise-attenuating buffers such as structures or truck trailers when within 100 feet of occupied academic, administrative, and residential areas.

- **LRDP EIR Mitigation Measure 4.4-3(a)** - Prior to final project approval, the Campus shall evaluate each project proposed under the 1994 LRDP for potential exposure to noise levels exceeding 60 L_{dn}.

- **LRDP EIR Mitigation Measure 4.4-4(a)** - The campus shall evaluate each project proposed under the 1994 LRDP for its potential to create, or contribute to, noise levels which would exceed State of California general plan guidelines on campus, Solano County general plan guidelines within Solano County, Yolo County general plan guidelines within Yolo County, City of Davis general plan guidelines within Davis, or Cal OSHA standards.

- **LRDP EIR Mitigation Measure 4.4-4(b)** - Implement Mitigation Measure 4.4-3 (a) and (b).

- **LRDP EIR Mitigation Measure 4.4-4(c)**
(i) The Noise Element of the City of Davis General Plan includes land use noise compatibility standards, as depicted in Figure 4.4-3. It is within the jurisdiction of the City of Davis to implement the policies and standards found in the Noise Element.

(ii) The Noise Element of the Yolo County General Plan includes land use noise compatibility standards, as depicted in Figure 4.4-2. It is within the jurisdiction of Yolo County to implement the policies and standards found in the Noise Element.

(iii) The Noise Element of the Solano County General Plan includes land use noise compatibility standards, as depicted in Figure 4.4-4. It is within the jurisdiction of Solano County to implement the policies and standards found in the Noise Element.

The mitigation measures listed above are incorporated into the proposed project, and the proposed project, as mitigated, is evaluated in the checklist below.

<table>
<thead>
<tr>
<th>NOISE</th>
<th>Potentially Significant Impact</th>
<th>Less Than Significant with Mitigation Incorporated</th>
<th>Impact for which LRDP/Program EIR is Sufficient</th>
<th>Less Than Significant Impact</th>
<th>No Impact</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Would the project result in:</strong></td>
<td></td>
<td></td>
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<td></td>
</tr>
<tr>
<td>a) Exposure of persons to or generation of noise levels in excess of standards established in any applicable 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>
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<tr>
<td>f) For a project within the vicinity of a private air strip, would the project expose people residing or working in the project area to excessive noise levels?</td>
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<tr>
<td>g) Exceed an applicable LRDP or Program EIR Standard of Significance?</td>
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</tbody>
</table>


Discussion

a,c,d) Construction

Noise generation at the proposed project site would take place using standard construction equipment and practices. The construction noise producing activities are expected to include site grading, foundation excavation, concrete pumping, framing, and finishing of the buildings. Pile driving would not take place as part of the proposed project. The project site would be located approximately 300 feet from the nearest academic building. As described on page 4.4-20 of the 1994 LRDP Draft EIR:

Construction activities may cause noise levels to exceed 60 CNEL [Community Noise Equivalent Level] temporarily when conducted close to existing or planned sensitive areas. Construction equipment and operations would generate noise levels of about 80 to 85 dBA at a distance of 50 feet from one individual major noise source, decreasing by about 6 dBA for every doubling of the distance and also depending on the type of noise control on the construction equipment. For example, at a distance of 100 feet from three major noise sources (a tractor, backhoe, and truck) noise levels would be about 74 to 86 dBA, at 200 feet 68 to 80 dBA, at 400 feet 62 to 74 dBA, and at 800 feet 56 to 68 dBA. Noise levels would be lower for a receptor when there is not a direct line-of-sight between the noise source and the receptor. A large portion of construction activity would take place at distances greater than 800 feet from existing sensitive areas and may not be heard above the ambient noise level. Interior noise levels would be 10 to 20 dBA lower depending on whether windows are open or closed and the acoustical properties of the buildings.

Construction activities associated with the proposed project would result in temporary short-term increases in existing noise levels, which could adversely affect adjacent academic uses such as Medical Science Buildings I B and C and Schalm Hall. Compliance with the 1994 LRDP EIR Mitigation Measure 4.4-1 (a) through (f), would be required as part of the proposed project and would reduce significant construction noise impacts to a less-than-significant level. No further mitigation is required.

Operation

The proposed project involves the operation of an Aquatics Center designed for daily training use by athletes and for hosting aquatic competitions with up to 500 spectators. The 1994 LRDP EIR included the potential development of athletic and recreational facilities at the proposed site. Figures 4.4-1 and 4.4-6 of the 1994 LRDP EIR show that the proposed Aquatics Center site is within road and highway noise contours identified as less than 65 Ldn. According to campus guidelines for land use noise compatibility, water recreation uses are acceptable at levels up to 70 Ldn. The proposed project would not expose people using the Aquatics Center to noise levels in excess of adopted standards.

The Aquatics Center is expected to generate noise from operational equipment, spectator cheering, and a public address system. As described on page 4.4-25 of the 1994 LRDP Draft EIR:
The proposed 1994 LRDP would result in various new stationary and operational noise sources. Proposed development could result in noise being produced by lawn maintenance equipment, air conditioners, recreational activities, agricultural operations, building mechanical systems, chillers, and compressors.

Resulting noise levels are anticipated to increase above ambient levels, but not enough to exceed significant levels on the campus, in Yolo County, in Solano County, or in the City of Davis.

During Aquatics Center events, spectator cheering and use of the public address system would result in increased noise levels at the project site. Events are anticipated to occur mostly on weekends during the swimming and diving seasons. The events would result in noise levels greater than the current conditions at the site and would be audible from nearby receptors. The most sensitive of these receptors would be the nearby academic buildings located in the Health Sciences District and the potential future housing area designated in the 1994 LRDP on the east side of La Rue Road. Due to the temporary and intermittent characteristics of this noise type and scheduling of events during evenings and weekends, operation of the Aquatics Center is not expected to increase the ambient noise levels more than 5 dBA. The impacts of increased ambient noise levels during operation of the proposed project are less-than-significant as described in the 1994 LRDP EIR. No mitigation is required.

The 1994 LRDP EIR concluded that cumulative growth under the 1994 LRDP would result in increased traffic and other noise sources that could expose people to significant noise levels (Impact 4.4-4). This cumulative impact was considered significant and unavoidable. Although continued implementation of 1994 LRDP EIR Mitigation Measures 4.4-4 (a) through (c) would reduce the magnitude of this cumulative impact, the impact would remain significant and unavoidable because Mitigation Measure 4.4-4 (c) falls outside the University of California's jurisdiction to enforce and monitor. The proposed project would contribute to, but not exceed, increased noise levels identified under the 1994 LRDP. This significant and unavoidable impact was adequately analyzed in the 1994 LRDP EIR and fully addressed by the Findings and Overriding Considerations adopted by The Regents in connection with its approval of the 1994 LRDP and certification of the 1994 LRDP EIR. There are no changed circumstances since the preparation of these documents that require reanalysis of cumulative impacts.

b) The proposed project is not expected to produce any groundborne vibration beyond the perimeter of the site. No impact is expected.

e,f) The project is not located within the campus airport noise contours identified in the 1994 LRDP EIR. No impact is expected.

g) Standards of significance for noise impacts that were used in preparation of the 1994 LRDP EIR are presented earlier in this section. These standards are consistent with the noise questions in the current Environmental Checklist. As discussed above, with the implementation of 1994 LRDP EIR mitigation measures, the proposed project would not exceed the standards of significance identified in the 1994 LRDP EIR and would not result in new significant impacts related to noise that were not previously analyzed in the 1994 LRDP EIR.
Summary

1994 LRDP EIR Mitigation Measures 4.4-1, 4.4-3(a), and 4.4-4 (a) through (c) are incorporated as part of the proposed project. The proposed project would not result in new or significant noise impacts that have not already been adequately assessed in the 1994 LRDP EIR.
6. AIR QUALITY

Background

The campus is located within the Yolo-Solano Air Quality Management District (YSAQMD), which is located within the boundaries of the Sacramento Valley Air Basin. As described on pages 4.5-6 and 4.5-7 of the 1994 LRDP EIR, the YSAQMD is in nonattainment of the state and federal standards for ozone \( \text{(O}_3 \text{)} \) and of the standards for particulate matter \( \text{(PM}_{10} \text{)} \). The YSAQMD is in attainment of the state and federal standards for carbon monoxide \( \text{(CO)} \).

Recently, the Environmental Protection Agency (EPA) added standards in recognition of increased concern over particulate matter 2.5 microns \( \text{(PM}_{2.5} \text{)} \) or less in diameter. According to information provided by EPA, designations for the new PM\(_{2.5}\) standards by the EPA will begin in the year 2002 with attainment plans due by 2005 for regions that violate the standards. PM\(_{2.5}\) measurements have been conducted as of February 1999, but it is too soon to determine if the YSAQMD is in attainment under the new federal PM\(_{2.5}\) standards. The California Air Resources Board (CARB) and local air districts in California have developed a PM\(_{2.5}\) monitoring network plan, but to date, no data has been collected.

The YSAQMD and the CARB maintain several monitoring sites in Yolo County. Data from a monitoring site on the campus (gathered from 1995-97) showed violations of state ozone standards in each of the three years reported. Based on results of computer modeling of 10 congested intersections in the vicinity of the campus, seven of the intersections indicated CO concentrations above state standards.

The major odor emission source on campus is animal waste associated with confined animal facilities. Other sources in the Central Campus include the wastewater treatment plant, motor vehicles, and the campus landfill.

1994 LRDP EIR Standards of Significance

The environmental analysis in the 1994 LRDP EIR considered an impact to air quality significant if campus or regional growth would:

- cause or contribute substantially to existing or projected violations of state or federal criteria air pollutant standards;
- result in exposure of sensitive receptors to substantial pollutant concentrations; or
- result in exposure of sensitive receptors to unpleasant odors.

For the purposes of the 1994 LRDP EIR, a "substantial contribution" to the regional pollutant load was defined as the new production of 550 pounds per day \( \text{(lbs/day)} \) of CO, and/or 82 lbs/day of ROC, NO\(_x\), SO\(_x\), and PM\(_{10}\).
1994 LRDP EIR Significant Impacts and Mitigation Measures

Significant impacts identified in the 1994 LRDP EIR that are relevant to the proposed project are presented in the following table. The levels of significance before and after application of mitigation measures identified in the 1994 LRDP EIR are also presented in the table. Impact 4.5-1 would either be less then significant after mitigation or remain significant and unavoidable depending on the project in question. Impacts of campus growth through 2005-06 on air quality were evaluated in Section 4.5 (Air Quality) of the 1994 LRDP Draft EIR. Cumulative air quality impacts were reevaluated in Section 4.2 of the WWTP Replacement Project Draft EIR and in Section 8 of the 1997-98 Major Capital Improvement Projects Draft SEIR. However, no changes were made to impacts or mitigation measures identified in the 1994 LRDP EIR. Appendix A of this Initial Study discusses revisions to the 1994 LRDP EIR in further detail. The proposed project is within the scope of the air quality analysis presented in the 1994 LRDP EIR and reevaluated in these subsequent documents, and there are no changed circumstances since the preparation of these documents that require reanalysis of the cumulative impacts. Please note that cumulative regional impact 4.5-6 included mitigation measures to reduce the impact to a less-than-significant level. However, this impact was identified as significant and unavoidable because the University of California can not guarantee the implementation of the mitigation measures that fall within other jurisdictions to enforce and monitor.

<table>
<thead>
<tr>
<th>LRDP EIR IMPACT</th>
<th>Level of Significance Prior to Mitigation</th>
<th>Level of Significance after/with Mitigation</th>
</tr>
</thead>
<tbody>
<tr>
<td>4.5-1 Construction activities as part of development allowed under the 1994 LRDP could result in short-term generation of dust (PM_{10}).</td>
<td>SU</td>
<td>LS/SU</td>
</tr>
<tr>
<td>4.5-3 Development allowed under the 1994 LRDP would generate increased levels of CO, O, precursors (ROC and NO_{x}), visibility reducing particles and PM_{10} emissions.</td>
<td>SU</td>
<td>SU</td>
</tr>
<tr>
<td>4.5-6 Development allowed under the 1994 LRDP, in conjunction with cumulative development in the region, would increase criteria pollutant emissions.</td>
<td>SU</td>
<td>SU</td>
</tr>
</tbody>
</table>

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

Mitigation measures in the LRDP EIR that are applicable to the proposed project and that will be required as part of project implementation include the following:

- **LRDP EIR Mitigation Measure 4.5-1** – The campus shall include in all construction contracts the following measures to reduce fugitive dust impacts.

  (a) All unpaved construction areas shall be sprinkled with water or other acceptable Yolo-Solano AQMD dust control agents during dust generating activities to reduce dust emissions. Additional watering or acceptable APCD [air pollution control district] dust control agents shall be applied during dry weather or windy days until dust emissions are not visible.
(b) Trucks hauling dirt and debris shall be covered to reduce wind blown dust and spills.

(c) On dry days, dirt or debris spilled onto paved surfaces shall be swept up immediately to reduce resuspension of particulate matter caused by vehicle movement. Approach routes to construction sites shall be cleaned daily of construction related dirt in dry weather.

(d) On-site stockpiles of excavated material shall be covered or watered.

- **LRDP EIR Mitigation Measure 4.5-3(a)** - Implement Mitigation Measures 4.3-1 and 4.3-5. (See the Transportation/Circulation section of this document for these mitigation measures.)

- **LRDP EIR Mitigation Measure 4.5-3(b)** - The campus shall acquire permits for stationary and area sources as required by the Yolo-Solano Air Quality Management District.

- **LRDP EIR Mitigation Measure 4.5-6(a)** - Implement Mitigation Measures 4.5-3 (a) and (b).

- **LRDP EIR Mitigation Measure 4.5-6(b)** - The Sacramento Air Basin includes a large number of jurisdictions, including the greater Sacramento metropolitan area. In the Basin, air quality is regulated by the Sacramento Metropolitan Air Quality Management District, YSAQMD, and a number of other Air Pollution Control Districts. Pursuant to rules, regulations, and policies of those AQMDs and APCDs, as well as adopted general plans throughout the Basin, it is within the jurisdiction of each local government or district to take actions to ensure compliance with the federal Clean Air Act and the California Clean Air Act.

The mitigation measures listed above are incorporated into the proposed project, and the proposed project, as mitigated, is evaluated in the checklist below.

<table>
<thead>
<tr>
<th>AIR QUALITY</th>
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<tbody>
<tr>
<td><strong>Would the project:</strong></td>
</tr>
<tr>
<td>Potentially Significant Impact</td>
</tr>
<tr>
<td>a) Conflict with or obstruct implementation of the applicable air quality plan?</td>
</tr>
<tr>
<td>b) Violate any air quality standard or contribute substantially to an existing or projected air quality violation?</td>
</tr>
</tbody>
</table>

- During Construction: ☐ | ☐ | ☑ | ☐ | ☐ |
- During Operation: ☐ | ☐ | ☑ | ☐ | ☐ |
**Discussion**

a) As required by the California Clean Air Act, the YSAQMD has published an Air Quality Attainment Plan (AQAP) in order to attempt to bring the YSAQMD into compliance with the federal and state ambient air quality standards. Because the YSAQMD is not in compliance with ozone standards, the AQAP addresses emissions for ozone precursors (volatile organic compounds and nitrogen oxides). The YSAQMD is also in non-attainment for state standards regarding PM$_{10}$ but AQAPs are currently not required to address this pollutant.

As discussed on page 4.5-7 of the 1994 LRDP Draft EIR with updated information on page 5.7-3 of the 1997-98 Major Capital Improvement Projects Draft SEIR, a Sacramento Area Regional Ozone Attainment Plan was submitted to the EPA in November 1994. The 1994 attainment plan has been reviewed and approved. This plan was required to demonstrate that the federal ozone standard would be achieved in the Sacramento region by 1999. Attainment could not be demonstrated for the Sacramento region, and a new plan to attain the standard by 2005 must be submitted in accordance with the federal Clean Air Act. This plan will not contain additional measures that would apply to the proposed project. The proposed project would not conflict with or obstruct implementation of the AQAP. No impact would occur.

b,c,d) **Construction**

The proposed project would include grading, trenching and excavation activities. As described on page 4.5-18 of the 1994 LRDP Draft EIR:
Construction-related activities would generate “fugitive dust” from earthmoving, excavation, demolition, and grading. The term “fugitive dust” refers to particulate matter emitted from an open area (i.e. not through a stack or an exhaust vent), due to human activities or by the forces of wind acting on exposed material such as soil or storage piles. Particulate (dust) emissions would vary with the level and type of activity, silt content and moisture of the soil and prevailing weather.

Sensitive receptors on campus (defined on page 4.5-16 of the 1994 LRDP EIR) include student and family housing complexes, day care centers, and recreational uses. Sensitive receptors in the vicinity of the proposed project include the Recreation Pool to the north, recreation fields to the northeast, and student housing to the east. Fugitive dust generated by project-related construction activities could cause violations of the state and federal PM$_{10}$ standards at times, and would contribute to significant PM$_{10}$ emissions previously identified in the 1994 LRDP EIR (Impact 4.5-1). This construction impact would be temporary and short-term. As indicated by the 1994 LRDP EIR on page 4.5-18, the region is in non-attainment for PM$_{10}$, and the YSAQMD would therefore require the implementation of dust suppression techniques to minimize dust emissions during construction.

Implementation of 1994 LRDP EIR Mitigation Measures 4.5-1 (a) through (d), included in the proposed project, would minimize project PM$_{10}$ emissions to a less-than-significant level and would ensure that construction activities associated with the proposed project would not result in new impacts relating to construction air quality beyond those previously identified in the 1994 LRDP EIR. Project construction is expected to occur in conjunction with other projects in the vicinity (primarily in the Health Sciences District). Multiple construction projects occurring simultaneously may cause cumulative significant and unavoidable dust impacts. The proposed project would contribute to, but not exceed, cumulative construction air quality impacts identified under the 1994 LRDP. This significant and unavoidable impact was adequately analyzed in the 1994 LRDP EIR and fully addressed by the Findings and Overriding Considerations adopted by The Regents in connection with its approval of the 1994 LRDP and certification of the 1994 LRDP EIR. There are no changed circumstances since the preparation of these documents that require reanalysis of cumulative impacts.

The 1994 LRDP EIR determined that construction activities would also result in short-term emissions of ozone (O$_3$) precursors. These precursors specifically include Reactive Organic Compounds (ROC) from paint, and ROC and nitrogen oxides (NOx) exhaust emissions from powered construction equipment and motor vehicles. The transport of construction workers, materials, and equipment could generate an incremental increase in vehicle trips. A maximum of 20 construction vehicles per day would enter and exit the site over the 24-month construction period. Although the Sacramento Valley Air Basin (SVAB), which includes the project site, is in non-attainment of both federal and state O$_3$ standards, the construction vehicle trips generated by the proposed project would occur during a limited period of time and the long-term impacts of the temporary increase in ROC and NOx would be negligible. This impact is further discussed on page 4.5-19 of the 1994 LRDP Draft EIR:

Given the potential for construction under the 1994 LRDP and the fact that O$_3$ formation is dependent on a complex interaction of atmospheric and meteorological factors over a relatively large physical area (such as an air basin), short-term emissions of O$_3$ precursors would not be expected to lead to a violation of ambient air quality standards for O$_3$ in the campus vicinity.
While these emissions would contribute (temporarily) to the non-attainment status of Yolo County for O\textsubscript{3}, they would likely represent less than the stationary source emission thresholds and, thus, are considered less-than-significant.

**Operation**

The proposed project would generate an increase in vehicle trips associated with the proposed Aquatics Center. Increased vehicle trips would contribute to increased levels of CO. The 1994 LRDP identified increased levels of CO, ozone precursors (NO\textsubscript{x}, ROC), visibility-reducing particles, and particulate matter resulting from development under the 1994 LRDP as a significant and unavoidable impact because established significance thresholds would be exceeded (Impact 4.5-3). The proposed project would incrementally contribute to, but would not exceed, this impact previously identified and adequately addressed in the 1994 LRDP EIR. Implementation of the 1994 LRDP EIR Mitigation Measure 4.5-3 (a) and (b), included in the proposed project, would reduce criteria pollutant emissions associated with increased vehicle trips, but due to limited data, the impact would remain significant and unavoidable. This significant and unavoidable impact was addressed in the Findings and Overriding Considerations adopted by The Regents in connection with its approval of the 1994 LRDP and certification of the 1994 LRDP EIR and no further mitigation is required.

The 1994 LRDP EIR recognized that criteria pollutant emissions of the 1994 LRDP in conjunction with those of cumulative development in the region would result in a significant and unavoidable impact (Impact 4.5-6). This is due to the fact that the actions of other jurisdictions are not within the control of the campus. Although 1994 LRDP Mitigation Measures 4.5-6 (a) and (b) would be implemented as part of the proposed project, this impact would remain significant and unavoidable because implementation of Mitigation Measure 4.5-6 (b) is not within the jurisdiction of the University to enforce and monitor. Furthermore, the project's individual contribution to this previously analyzed impact would be limited due to the small number of additional vehicles associated with the proposed project. This impact was adequately analyzed in the 1994 LRDP EIR and fully addressed in the Findings and Overriding Considerations adopted by The Regents in connection with its approval of the 1994 LRDP EIR and certification of the 1994 LRDP EIR. There are no changed circumstances since the preparation of these documents that require reanalysis of cumulative impacts.

In addition, the 1994 LRDP EIR concluded that development under the 1994 LRDP in conjunction with cumulative development in the region would increase CO concentrations at intersections. This impact was considered to be less-than-significant because CO is an attainment pollutant in the SVAB. No mitigation was required. The proposed project would contribute to, but not exceed, increased CO emissions identified under the 1994 LRDP because it is consistent with approved development. This impact would, therefore, remain less-than-significant.

**e)** The proposed project would not generate additional objectionable odors on campus and would not expose users to existing objectionable odors. No impact would occur.

**f)** Standards of significance for air quality impacts that were used in preparation of the 1994 LRDP EIR are presented earlier in this section. These standards are consistent with the air
quality questions in the current Environmental Checklist. As discussed above, with the implementation of applicable 1994 LRDP EIR mitigation measures, the proposed project would not exceed the standards of significance identified in the 1994 LRDP EIR and would not result in new significant impacts related to noise that were not previously analyzed in the 1994 LRDP EIR.

**Summary**

The proposed project would incorporate 1994 LRDP EIR Mitigation Measures 4.5-1, 4.5-3 (a) and (b), and 4.5-6 (a) and (b). The project would not result in new or significant air quality impacts that have not already been adequately assessed in the 1994 LRDP EIR.
7. HAZARDS AND HAZARDOUS MATERIALS

Background

UC Davis uses many materials, some of which are considered hazardous, during the course of daily operations. Such hazardous materials include many chemical reagents, solvents, radioisotopes, fuels, paints, cleansers, pesticides, herbicides, and biohazards that are used in activities such as laboratory research, building and grounds maintenance, vehicle maintenance, agricultural applications, fine arts, and clinical veterinary medicine. The use of hazardous materials on campus generates hazardous byproducts that must eventually be handled and disposed of as hazardous wastes. Hazardous wastes are generated at campus locations where hazardous materials are used, including research and teaching laboratories, maintenance facilities, agricultural operations, art studios, and the health sciences and veterinary medicine complexes. Research and teaching activities produce most of the hazardous waste generated annually by the campus. Because campus hazardous materials use is primarily associated with teaching and research laboratory activities, the 1994 LRDP EIR assumed that activities involving the use of hazardous materials would increase in proportion to the increase in instruction and research space, an increase of about 41 percent.

Since adoption of the 1994 LRDP, the campus has implemented several 1994 LRDP EIR mitigation measures identified to mitigate the use and generation of hazardous chemicals associated with campus growth. In conformance with 1994 LRDP EIR Mitigation Measures 4.6-2(b), 4.6-4(b), and 4.6-6(a), a new handling facility for campus hazardous wastes (the Environmental Services Facility) has been constructed and is currently operational, and the old facility is in the process of being closed. The new facility currently operates at about 40 percent of its capacity. In conformance with 1994 LRDP EIR Mitigation Measures 4.6-1(a)(iii), 4.6-2(d), and 4.6-6(c), the Waste Minimization Coordinator was established in 1994 and a hazardous waste minimization plan was prepared. In conformance with 1994 LRDP EIR Mitigation Measures 4.6-1(b) and (c), the campus also conducts biennial audits by a third party to document the compliance status of campus departments and units.

1994 LRDP EIR Standards of Significance

The environmental analysis in the 1994 LRDP EIR considered an impact to hazardous materials and/or public safety significant if campus or regional growth would:

- create a substantial potential health or safety hazard due to risk of upset (accidents);
- interfere with emergency response plans or emergency evacuation plans;
- involve the use, production, or disposal of materials in a manner that poses a hazard to people, or to animal or plant populations in the area affected;
- expose employees to working situations that exceed health standards; or
- violate applicable laws intended to protect human health and safety.
Significant impacts identified in the 1994 LRDP EIR that are relevant to the proposed project are presented in the following table. The levels of significance before and after application of mitigation measures identified in the 1994 LRDP EIR are also presented. Impacts of campus growth through year 2005-06 related to hazardous materials are addressed in Section 4.6 (Hazardous Materials and Public Safety) of the 1994 LRDP Draft EIR. Cumulative hazardous materials and public safety impacts were reevaluated in the WWTP Replacement Project EIR (Chapter 4.3 of the WWTP Replacement Project Draft EIR), but no changes were made to the impacts, mitigation measures, or levels of significance identified in the 1994 LRDP EIR. Appendix A in this Initial Study summarizes updates and revisions to the 1994 LRDP EIR. The proposed project is within the scope of the hazardous materials and public safety analysis presented in the 1994 LRDP EIR, as reevaluated in the WWTP Replacement Project EIR, and there are no changed circumstances since the preparation of these documents that require reanalysis of cumulative impacts. Please note that cumulative impacts 4.6-3, 4.6-4, and 4.6-23 include mitigation measures to reduce impacts to less-than-significant levels. However, these impacts were identified as significant and unavoidable because the University of California can not guarantee implementation of mitigation measures that fall within other jurisdictions to enforce and monitor.

### LRDP EIR IMPACT

<table>
<thead>
<tr>
<th>Impact Description</th>
<th>Level of Significance Prior to Mitigation</th>
<th>Level of Significance after/with Mitigation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Implementation of the 1994 LRDP would lead to an increase in hazardous chemical use at UC Davis that could expose campus occupants to potential health or safety risks.</td>
<td>PS</td>
<td>LS</td>
</tr>
<tr>
<td>Implementation of the 1994 LRDP could lead to an increase in the generation of hazardous chemical waste at UC Davis that could expose campus occupants to potential health or safety risks.</td>
<td>PS</td>
<td>LS</td>
</tr>
<tr>
<td>Increased use of hazardous chemical materials related to cumulative development in the region would increase the number of people exposed to health hazards associated with such use.</td>
<td>SU</td>
<td>SU</td>
</tr>
<tr>
<td>Implementation of the 1994 LRDP, in conjunction with other development in the region that generates hazardous chemical waste, could place an additional load on hazardous waste management facilities.</td>
<td>SU</td>
<td>SU</td>
</tr>
<tr>
<td>Construction activities under the 1994 LRDP could expose campus occupants and construction workers to contaminated soil or groundwater.</td>
<td>PS</td>
<td>LS</td>
</tr>
<tr>
<td>Increased campus operations using hazardous materials resulting from development under the 1994 LRDP could exceed emergency response capabilities at UC Davis.</td>
<td>S</td>
<td>LS</td>
</tr>
<tr>
<td>LRDP EIR IMPACT</td>
<td>Level of Significance Prior to Mitigation</td>
<td>Level of Significance after/with Mitigation</td>
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<tr>
<td>4.6-23 The increased campus operations to be developed under the 1994 LRDP, in</td>
<td>SU</td>
<td>SU</td>
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<tr>
<td>conjunction with anticipated growth in the City of Davis, could contribute to</td>
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<tr>
<td>cumulative demand for emergency response capabilities in the Davis area.</td>
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<tr>
<td>4.6-24 Hazardous materials used at facilities developed under the 1994 LRDP may</td>
<td>S</td>
<td>LS</td>
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<tr>
<td>be inadvertently released to the sewer or disposed of with non-hazardous solid</td>
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<tr>
<td>waste.</td>
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Levels of Significance: SU = Significant and Unavoidable; PS = Potentially Significant; S = Significant; LS = Less than Significant

Mitigation measures identified in the 1994 LRDP EIR, which are applicable to the proposed project and that will be required as part of project implementation, include the following:

- **1994 LRDP Mitigation Measure 4.6-1(a)** - The campus shall strengthen programs to improve compliance with the laws and regulations applicable to the use of hazardous materials. Such efforts would include specific steps aimed at improving health and safety conditions by increasing the resources devoted to implementation of laws and regulations regarding the use of hazardous materials. This increase would support an improved, ongoing, satisfactory level of compliance. Specific actions would include, but would not be limited to, the following:

  (i) **Community Right-to-Know and Business Plan** - Increasing the resources devoted to implementing Community Right-to-Know and Business Plan requirements, as needed, to supplement the existing program for the purpose of meeting current and future local, state, and federal data reporting requirements. This change would allow better tracking and reporting of non-radioactive chemical hazardous materials on campus, would provide critical information to on-campus and off-campus emergency response service providers in case of a chemical emergency, and would expand current safety training programs to minimize accident risks.

  (ii) **Injury and Illness Prevention, Chemical Hygiene, and Emergency Actions Plans** - Increasing the resources and improving the mechanisms needed (1) to finish developing these plans, and (2) to assure that these plans are adequately implemented and maintained, including training and emergency planning.

- **LRDP EIR Mitigation Measure 4.6-1(b)** - The campus shall establish a self-audit mechanism and a reporting system to document the compliance status of campus departments and units.

- **LRDP EIR Mitigation Measure 4.6-1(c)** - Biennial health and safety audits shall be conducted by individuals independent of the campus.

- **LRDP EIR Mitigation Measure 4.6-2(d)** - Implement Mitigation Measure 4.6-1(a), which would require the campus to create a Waste Minimization Coordinator position to implement
the campus Hazardous Waste Minimization Plan.

- **LRDP EIR Mitigation Measure 4.6-3** - Implement Mitigation Measures 4.6-1(a) through (c).

- **LRDP EIR Mitigation Measure 4.6-4(a)** - The campus Waste Minimization Coordinator (to be established as part of mitigation measure 4.6-1(a)), shall update and implement existing hazardous waste minimization plan. The updated plan shall address hazardous waste generated by 1994 LRDP projects and shall specify feasible administrative and technical approaches to reduce the amount of hazardous waste generated on campus.

- **LRDP EIR Mitigation Measure 4.6-16(a)** - During the site selection process for each site to be developed under the 1994 LRDP, the campus shall determine the need to have the site and adjacent areas investigated for the presence of hazardous materials or wastes by completing a “due diligence checklist.”

  If further investigation is warranted, the investigation shall be carried out by a Registered Environmental Assessor (i.e., a professional environmental scientist or engineer registered in California) or a registered engineer. The investigations shall be environmental audits, which shall include, at minimum, site inspections for hazardous materials, examination of historic records for evidence of hazardous materials use, interviews with campus personnel, and review of campus records for evidence of contamination.

  For each site audit, the qualified person shall prepare a report detailing the results of the inspection and submit it to appropriate campus offices. The report preparer shall either certify that the site is free of hazards, recommend further investigations, or recommend preparing a site mitigation plan. After reviewing and accepting the report, reviewing offices shall submit it to the Office of Resource Management and Planning (the office responsible for site selection and environmental review on campus) with their recommendations. The campus shall ensure that inspection reports are completed prior to excavation or construction at the development site.

- **LRDP EIR Mitigation Measure 4.6-22(a)** - The campus emergency response team shall be adequately trained and equipped to respond to hazardous materials emergencies prior to occupancy of the first 1994 LRDP project approved that could require hazardous materials emergency response capabilities. The campus shall provide sufficient resources to respond to a Level A hazardous materials incident (the most hazardous level), in coordination with the City of Davis if necessary.

- **LRDP EIR Mitigation Measure 4.6-22(b)** - The campus shall prepare (or update) safety planning documents in accordance with applicable laws, regulations, and campus policies prior to occupying facilities constructed under the 1994 LRDP. The campus shall implement safety training programs upon occupying each new building.

- **LRDP EIR Mitigation Measure 4.6-22(c)** - Departments and Principal Investigators shall prepare Injury and Illness Prevention Plans, Laboratory Chemical Hygiene Plans, and Emergency Action Plans for all new buildings, as necessary. These plans would be reviewed and approved by the campus for each department and each Principal Investigator or
Laboratory Director to be located at any particular new building before the department or laboratory would be permitted to occupy the new space.
- LRDP EIR Mitigation Measure 4.6-22(d) - The campus shall address emergency planning and safety training for the occupants of new buildings constructed under the 1994 LRDP by assigning a Building Safety Coordinator for each building. These staff would coordinate emergency response planning and implementation efforts for the building and implement required Cal/OSHA regulations related to developing an evacuation plan. For example, emergency drills would be coordinated such that all of the building's occupants would participate at the same time, regardless of their departmental affiliation. The evacuation plan and emergency response plans would provide general guidelines and procedures to be followed during emergencies and disasters. The plans would address the removal of occupants and the establishment of temporary meeting areas in the event of an emergency. As part of implementing the plans, project occupants would be adequately trained to implement the plans as well as all other required safety procedures.

- LRDP EIR Mitigation Measure 4.6-22(e) - Implement Mitigation Measures 4.6-1(a) through (c).

- LRDP EIR Mitigation Measure 4.6-23 - Implement Mitigation Measure 4.6-22(a).

- LRDP EIR Mitigation Measure 4.6-24(a) - The campus shall comply with the revised Waste Discharge Requirements, particularly the requirement to establish a Pretreatment Program.

- LRDP EIR Mitigation Measure 4.6-24(b) - The campus shall provide the resources needed for implementing a waste exclusion program.

The mitigation measures listed above are incorporated into the proposed project, and the proposed project, as mitigated, is evaluated in the checklist below.

<table>
<thead>
<tr>
<th>HAZARDS AND HAZARDOUS MATERIALS</th>
<th>Potentially Significant Impact</th>
<th>Less Than Significant with Mitigation Incorporated</th>
<th>Impact for which LRDP/Program EIR is Sufficient</th>
<th>Less Than Significant Impact</th>
<th>No Impact</th>
</tr>
</thead>
<tbody>
<tr>
<td>Would the project:</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>a) Create a significant hazard to the public or the environment through the routine transport 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>Would the project:</td>
<td>Potentially Significant Impact</td>
<td>Less Than Significant with Mitigation Incorporated</td>
<td>Impact for which LRDP/Program EIR is Sufficient</td>
<td>Less Than Significant Impact</td>
<td>No Impact</td>
</tr>
<tr>
<td>---------------------------------------------------------------------------------</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>
<tr>
<td>i) Exceed an applicable LRDP or Program EIR Standard of Significance?</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
</tr>
</tbody>
</table>
Discussion

a,b) Construction

Construction of the proposed project would involve the use of various products that could contain materials classified as hazardous (including solvents, adhesives, cements, paints, cleaning agents, and degreasers). Fuels, such as gasoline and diesel, would also be used in heavy equipment and other construction vehicles. The use and storage of these products is subject to applicable hazardous materials regulations, as discussed on pages 4.6-4 through 4.6-7 and in Appendix E of the 1994 LRDP Draft EIR, and contract specifications would also contain specific provisions regarding the use of these products and compliance with applicable regulations and standards. Contract specifications would also require temporary impermeable surfaces be placed under construction staging areas to protect soil and groundwater from contamination associated with inadvertent spills or leaks.

Operation

Operation of the proposed project would involve the use of small quantities of pesticides and herbicides in landscaping the project's approximately 0.6 acre softscape grounds. However, use of pesticides and herbicides on campus is being reduced from past levels (Mezger 2001). Small quantities of household-type cleaners would be used in building maintenance. The use of cleaning products containing hazardous chemical materials already occurs on campus, and the amounts associated with these uses would be similar to existing operation and maintenance activities.

Pool maintenance would involve the use of hazardous chemicals. A chemical treatment system would be selected for the proposed project based on the relative safety and efficiency of options. The pool would be treated with either sodium hypochlorite (liquid chlorine) or calcium hypochlorite (tablet chlorine) for disinfection, and a pH control agent (most likely muriatic acid). These treatment options are discussed further below.

- **Liquid chlorine**: Liquid chlorine for the proposed pool would be stored in two 500-gallon double contained tanks. Since liquid chlorine tends to increase pH, a pH control such as muriatic acid would also be used. Muriatic acid would be stored in one 500-gallon tank. Liquid chlorine and muriatic acid are both classified as corrosive materials. Each of the three chemical tanks would be stored in its own storage area in the filtration room. Liquid feed pumps would be used to draw the chemicals from the storage containers to the pool's circulation system. The chemicals would be supplied to onsite storage containers directly from vendor tanks and hoses, limiting handling. Pool operators would clean the chlorine injectors as preventative maintenance every few months. The drawbacks to liquid chlorine treatment include the build-up of total dissolved solids and increased salinity (liquid chlorine is sodium-based).
Tablet chlorine: Tablet chlorination systems involve an erosion-feed process that dissolves chlorine tablets to create a chlorine solution and injects the solution into the pool's circulation system. A tablet chlorination system for the proposed pool would require four tablet feeders each storing up to 200 pounds of chlorine tablets. Tablet chlorine, classified as an oxidizer, would be delivered to the facility in 50 to 100 pound pails and stored onsite consistent with relevant regulatory requirements. A tablet chlorination system requires more operator handling than liquid chlorine. In addition to cleaning the feeder system every few weeks, tablet chlorine must be physically placed by pool operators into the chlorination system. Unlike the variable output feed pumps used for liquid chlorine, erosion feed chlorinators cannot increase or decrease output over a short period of time. Another drawback is that because tablet chlorine is calcium based, it tends to increase total dissolved solids and hardness in the pool water. However, tablet chlorine is considered easier to store than liquid chlorine. Like liquid chlorine, tablet chlorine increases pH and a pH control such as muriatic acid would be used.

Consistent with 1994 LRDP EIR Mitigation Measure 4.6-22(c), an Injury and Illness Prevention Plan and an Emergency Action Plan would be developed for the proposed facility. In compliance with these plans, personnel responsible for operating the pool's chemical system would receive appropriate safety training. Design and construction of the proposed project would conform to all applicable building codes and fire/life safety codes.

The use, storage, and transport of hazardous materials as part of operation of the proposed project would be accomplished consistent with regulatory requirements and the risk of upset would be minimal.

The 1994 LRDP EIR identified increased use of hazardous chemicals and increased generation of hazardous chemical waste as potentially significant impacts (Impacts 4.6-1 and 4.6-2). The proposed project's contribution to these impacts is well within the scope assessed in the 1994 LRDP EIR. As discussed in the Background section of this checklist item, the campus has implemented 1994 LRDP EIR Mitigation Measures 4.6-2(b), 4.6-4(b), and 4.6-6(a) by constructing the new Environmental Services Facility. In conformance with 1994 LRDP EIR Mitigation Measures 4.6-1(a)(iii), 4.6-2(d), and 4.6-6(c), the Waste Minimization Coordinator was established (in 1994) and a hazardous waste minimization plan was prepared. Continued implementation of 1994 LRDP EIR Mitigation Measures 4.6-1(b) and (c) (biennial audits by a third party to document the compliance status of campus departments and units) and implementation of 1994 LRDP EIR Mitigation Measures 4.6-1 (a) (i) and (ii) (increasing Community Right-to Know and Injury and Prevention efforts), incorporated into the proposed project, would reduce this impact to a less-than-significant level.

The 1994 LRDP EIR also identified that hazardous materials used at facilities developed under the 1994 LRDP could be inadvertently released to the sewer or disposed of with non-hazardous solid waste (Impact 4.6-24). Continued implementation of 1994 LRDP EIR Mitigation Measures 4.6-24 (a) and (b), ensuring compliance with Waste Discharge Requirements and a waste exclusion program, would reduce this impact to a less-than-significant level.
Cumulative impacts related to the increased use of hazardous chemicals and increased generation of hazardous chemical waste as a result of implementation of the 1994 LRDP in conjunction with regional development, were identified as significant and unavoidable in the 1994 LRDP EIR (Impacts 4.6-3 and 4.6-4). Continued implementation of 1994 LRDP EIR Mitigation Measures 4.6-3 and 4.6-4 (a) would reduce the magnitude of these impacts, but they would remain significant and unavoidable because chemical use off-campus is outside the jurisdiction of the University to regulate. These impacts were adequately analyzed in the 1994 LRDP EIR and fully addressed in the Findings and Overriding Considerations adopted by The Regents in connection with its approval of the 1994 LRDP and its certification of the 1994 LRDP EIR. There are no changed circumstances since the preparation of these documents that require reanalysis of cumulative impacts.

Site Contamination

The 1994 LRDP EIR identified the potential for soil or groundwater contamination (as a result of various campus activities) to be present in areas that could be developed under the 1994 LRDP (Impact 4.6-16). Construction of projects in such locations could expose campus occupants and construction workers to contaminated soil or groundwater as a result of past uses of the various sites. Exposure to hazardous materials in contaminated soil or groundwater could cause various short- or long-term health effects in persons exposed to the contamination. Work at locations that are contaminated with hazardous materials could pose adverse health and safety risks for workers or the public if the contaminants are not identified and properly managed. Figure 4.6-1 on page 4.6-28 of the 1994 LRDP Draft EIR identified on-campus locations requiring further investigation for soil and groundwater contamination.

Consistent with Mitigation Measure 4.6-16(a), the campus conducted a Phase 1A Preliminary Site Assessment Due Diligence Report for the proposed project site. The assessment included a review of historical aerial photos and discussions with campus sources and found that the site has been relatively unused since the mid-1970's. Past use has been for agriculture, including orchards and row crops. The report concluded that "no environmental issues or conditions were identified that would prohibit the University from proceeding with this project" (Oatman 1999). Therefore, the proposed project site would not expose persons to existing hazardous materials or waste contamination.

c) The proposed project would be constructed on the central campus, west of La Rue Road and east of Parking Lot 54A, and would not be located within one-quarter mile of an existing or proposed school. No impact would occur.

d) The proposed project would not be located on a site that is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5. No impact would occur.
e, f) There are no private airstrips in the vicinity of the proposed project. The University Airport is a public use airport designed to accommodate aircraft up to 12,500 pounds, which includes most single-engine and some light twin-engine planes. According to the 1994 LRDP EIR, although the University Airport, as a university-owned facility, is outside the jurisdiction of the local Airport Land Use commission, future land use compatibility guidelines to attenuate noise, height and safety impacts based on the Federal Aviation Administration requirements have been prepared by the Sacramento Area Council of Governments. The proposed project site is located on the central campus, approximately one mile east of the University Airport. No impacts due to safety hazards related to the airport would occur as a result of the proposed project.

g) As discussed in Item 4e of this Environmental Checklist, the location and design of the proposed project would allow adequate emergency access. Therefore, the project would not interfere with an adopted emergency response plan or emergency evacuation plan. The 1994 LRDP EIR concluded that increased campus operations using hazardous materials resulting from development allowed under the 1994 LRDP could exceed emergency response capabilities at UC Davis (Impact 4.6-22). Continued compliance with 1994 LRDP EIR Mitigation Measures 4.6-22 (a) through (e), incorporated into the proposed project, would reduce this impact to a less-than-significant level.

The 1994 LRDP EIR identified that increased campus operations allowed under the 1994 LRDP, in conjunction with anticipated growth in the City of Davis, could contribute to cumulative demand for emergency response capabilities in the Davis area (Impact 4.6-23). Although 1994 LRDP EIR Mitigation Measure 4.6-23, incorporated as part of the proposed project, was identified to reduce the significance of the cumulative impact, the impact would remain significant and unavoidable because the University could not guarantee that the City of Davis and Yolo County would reach a Mutual Aid Agreement to provide first-response both in the campus and in the City and County. The proposed project would contribute to, but not exceed, impacts associated with increased demand for emergency response identified under the 1994 LRDP. This significant and unavoidable impact was adequately evaluated in the 1994 LRDP EIR and fully addressed by the Findings and Overriding Considerations adopted by The Regents in connection with its approval of the 1994 LRDP and certification of the 1994 LRDP EIR. There are no changed circumstances since the preparation of these documents that require reanalysis of cumulative impacts.

h) The proposed project site is currently undeveloped, except for a bike path that traverses the site. The site is adjacent to undeveloped land to the north and south and is bordered by a road to the east and a parking lot to the west. The project site is vegetated with grass and a few trees and shrubs border the bike path, but the site does not contain large amounts of flammable brush, grass, or trees. Campus Grounds Services mows the grass on the project site twice each year for fire prevention. These practices would be continued on adjacent undeveloped fields during and after construction of the project (Mezger 2001). Therefore, implementation of the proposed project would not increase the existing wildland fire hazard, and no impact would occur.
i) Standards of significance for hazards and hazardous materials impacts that were used in preparation of the 1994 LRDP EIR are presented earlier in this section. These standards are consistent with the hazards and hazardous materials questions in the current Environmental Checklist. As discussed above, with the incorporation of relevant 1994 LRDP EIR mitigation measures, the proposed project would not exceed the standards of significance identified in the 1994 LRDP EIR and would not result in new significant impacts related to hazards and hazardous materials that were not previously analyzed in the 1994 LRDP EIR.

Summary

1994 LRDP EIR Mitigation Measures 4.6-1 (a) through (c); 4.6-2 (d); 4.6-3; 4.6-4 (a); 4.6-16 (a) through (c); 4.6-22 (a) through (d); 4.6-23; and 4.6-24 (a) and (b) would be implemented as part of the proposed project. The proposed project would not result in new or significant hazards and hazardous materials impacts that have not already been adequately assessed in the 1994 LRDP EIR.
8. Biological Resources

Background

The campus is located in a region composed primarily of agricultural lands that include remnant riparian (streamside) and urban areas. Habitat types found on the campus are discussed in the 1994 LRDP EIR on pages 4.7-2 to 4.7-8 and are illustrated in Figure 4.7-1 on page 4.7-3. The proposed project site is currently undeveloped, except for a bike path that traverses the site. The site, considered ruderal/annual grassland habitat, is vegetated with grass and a few ornamental trees that border the bike path. The site has historically been used for agriculture (including orchards and row crops), but it has remained relatively unused since the mid-1970's. Campus Grounds Services currently mows the grass on the project site twice per year for fire prevention. The site is adjacent to undeveloped land to the north and south and is bordered by a road to the east and a parking lot to the west.

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

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

Special-status species such as state and federally listed rare, threatened or endangered species are discussed in the 1994 LRDP EIR on pages 4.7-8 through 4.7-18. Potential special-status species that might be found on the campus are presented in Tables 4.7-1 and 4.7-2 of the 1994 LRDP EIR. The following special-status species may potentially occur on the proposed project site:

**Special-Status Plants**

No special-status plant species or potential habitat for special-status plant species were observed during a plant survey conducted on the site (Jones & Stokes 1998).

**Special-Status Animals**

Three special-status animals may potentially occur on the site: burrowing owl, valley elderberry longhorn beetle, and Swainson's Hawk.
Burrowing Owl: The burrowing owl is fully protected against take pursuant to Section 3503.5 of the California Fish and Game Code and is a California Department of Fish and Game (CDFG) Species of Special Concern. The burrowing owl is also designated a Migratory Nongame Bird of Management Concern by the US Fish and Wildlife Service (USFWS). Burrowing owls are small birds with the relatively unique habits of being active during the day as well as in the evening, and of nesting underground. They typically use burrow systems formerly occupied by ground squirrels or other large burrow-dwelling rodents. Their diet is usually dominated by insects, but may also include small mammals, reptiles, and amphibians. Burrowing owls generally forage in open fields with relatively sparse, short vegetation; their foraging ability is disrupted by dense, tall vegetation. Burrowing owls currently nest in a field east of the Health Sciences District, located approximately 400 feet south of the proposed project site.

Swainson's Hawk: The Swainson's hawk 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 California Fish and Game Code and the Federal Migratory Bird Treaty Act. The Swainson's hawk is a relatively large bird-of-prey that typically nests in large trees in riparian corridors as well as in isolated trees 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 they may travel 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.

Four trees used as nest sites by Swainson's Hawks during the last decade are located within 1/2-mile of the project site. All six are over 2,000 feet away from the proposed project site and are screened from the project site by existing vegetation and/or structures, are in areas with human activity, and are used by birds that are habituated to the activities in these settings. The ruderal/annual grassland portion of the project site is potential Swainson's Hawk foraging habitat.

Valley Elderberry Longhorn Beetle (VELB): The VELB is listed as a threatened species under the federal Endangered Species Act. This species requires its host plant, the Mexican elderberry shrub, for its complete life cycle. The USFWS considers all elderberry shrubs within the historic range of VELB (the Central Valley and foothills up to 2,000 feet) as potential habitat for this species. No elderberry plants are located on the project site. The closest known elderberry plant is located approximately 1,000 feet north of the proposed project site.

1994 LRDP EIR Standards of Significance

The environmental analysis in the 1994 LRDP EIR considered an impact to biological resources significant if campus or regional growth would:
- result in substantial, or potentially substantial, adverse change in the native flora or fauna, including candidate species and CDFG "Species of Special Concern" from conversion of existing habitat to urban uses or disturbance of areas currently supporting such species;

- 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 the substantial reduction in acres of habitat (including wetlands) of native fish, wildlife, or plants;

- interfere substantially (creation of barriers to the free movement between habitats both locally and regionally) with the movement of any resident or migratory fish or wildlife species; or

- be in conflict with existing state or federal natural resource protection laws, policies, or guidelines.

**1994 LRDP EIR Significant Impacts and Mitigation Measures**

Impacts of campus growth through 2005-06 on biological resources are addressed in Section 4.7 (Biological Resources) of the 1994 LRDP Draft EIR. The WWTP Replacement Project EIR and the 1997-98 Major Capital Improvement Projects SEIR identified the loss of additional ruderal/annual grassland habitat over the amount assessed in the 1994 LRDP EIR and revised the magnitude of associated impacts, 1994 LRDP EIR Impacts 4.7-1, 4.7-5, and 4.7-9 (Appendix G of the WWTP Replacement Project Final EIR and Section 8 of the 1997-98 Draft SEIR). The 1997-98 Major Capital Improvement Projects SEIR, as revised by the Western Human Nutrition Center Tiered Initial Study and Mitigated Negative Declaration, presented a measure (identified as 1994 LRDP EIR Mitigation Measure 4.7-3(d)) to mitigate the cumulative impact on burrowing owl nesting habitat (Section 2 of the 1997-98 Draft SEIR, page 65 of the Initial Study). Appendix A of this document discusses revisions to the 1994 LRDP EIR in further detail. Significant impacts on biological resources identified in the 1994 LRDP EIR, as revised, that are relevant to the proposed project are presented in the following table. The levels of significance before and after application of mitigation measures identified in the 1994 LRDP EIR, as revised, are also presented in the table. The proposed project is within the scope of the analysis in the 1994 LRDP EIR as updated in subsequent documents, and there are no changed circumstances since the preparation of these documents that require reanalysis of the cumulative impacts.

<table>
<thead>
<tr>
<th>LRDP EIR IMPACT</th>
<th>Level of Significance Prior to Mitigation</th>
<th>Level of Significance after/with Mitigation</th>
</tr>
</thead>
<tbody>
<tr>
<td>4.7-1 Development allowed under the 1994 LRDP would result in the conversion of approximately 231 acres of Agricultural Lands and Annual/Ruderal Grassland to Campus-related development and could result in the loss of the special-status plant species listed in Table 4.7-1 or added to the special-status plant list in the future.</td>
<td>PS</td>
<td>LS</td>
</tr>
</tbody>
</table>
## LRDP EIR IMPACT

<table>
<thead>
<tr>
<th>Level of Significance Prior to Mitigation</th>
<th>Level of Significance after/with Mitigation</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>4.7-3</strong> Development allowed under the 1994 LRDP would result in the conversion of approximately 231 acres of Agricultural Land and Ruderal/Annual Grassland habitat to Campus-related development and could result in the loss of burrowing owl nesting habitat.</td>
<td>PS</td>
</tr>
<tr>
<td><strong>4.7-4</strong> Development allowed under the 1994 LRDP would result in the conversion of approximately 231 acres of Agricultural Land and Ruderal/Annual Grassland habitat to Campus-related development which could result in the loss of nesting habitat for raptors (birds-of-prey).</td>
<td>PS</td>
</tr>
<tr>
<td><strong>4.7-5</strong> Development allowed under the 1994 LRDP would result in the conversion of approximately 231 acres of Agricultural Land and Ruderal/Annual Grassland habitat to Campus-related development which would result in the loss of foraging habitat for the Swainson's hawk.</td>
<td>S</td>
</tr>
<tr>
<td><strong>4.7-6</strong> Development allowed under the 1994 LRDP could result in the potential failure of Swainson's hawk nesting efforts.</td>
<td>PS</td>
</tr>
<tr>
<td><strong>4.7-7</strong> Development allowed under the 1994 LRDP could result in the loss of potential habitat for the valley elderberry longhorn beetle.</td>
<td>PS</td>
</tr>
<tr>
<td><strong>4.7-9</strong> Development allowed under the 1994 LRDP would contribute 231 acres of the cumulative loss in the region of 1,258 acres of Agricultural Land and Ruderal/Annual Grassland habitat for resident and migratory wildlife species.</td>
<td>SU</td>
</tr>
<tr>
<td><strong>4.7-10</strong> Development allowed under the 1994 LRDP could contribute to the cumulative loss of valley elderberry longhorn beetle habitat.</td>
<td>SU</td>
</tr>
</tbody>
</table>

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

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1 As revised by the WWTP Replacement Project EIR and the 1997-98 Major Capital Improvements Project SEIR (summarized in Appendix A of this document).

Mitigation measures in the 1994 LRDP EIR that are applicable to the proposed project and that will be required as part of project implementation include the following:

- **LRDP EIR Mitigation Measure 4.7-1(a)** - During the project planning phase, the Campus shall conduct a rare plant survey if the site was previously undeveloped. Surveys shall be conducted by qualified biologists in accordance with the most current CDFG/USFWS guidelines or protocols and shall be conducted at the time of year when the plants in question are identifiable. (Identification periods are included in Table 4.7-1, however, survey timing for the various plant species is dependent in part on yearly rainfall patterns and is determined on a case-by-case basis.)

- **LRDP EIR Mitigation Measure 4.7-1(b)** - Based on the results of the survey, prior to design approval, the Campus in consultation with CDFG and/or USFWS, shall determine whether the project would result in a significant impact to any special-status plant species. Evaluation of project impacts shall consider the following:
The status of the species in question (e.g., officially listed by the State or Federal Endangered Species Acts, candidate species, CNPS list).

The relative density and distribution of the on-site occurrence versus typical occurrences of the species in question.

The habitat quality of the on-site occurrence relative to historic, current or potential distribution of the population.

If these surveys reveal no occurrences of any species, or if the Campus in consultation with CDFG or USFWS determines that no significant impacts on any special-status plant species would result from project implementation, then no further mitigation would be required.

Should one or more of special-status plant species occur on the project site, and a determination of significant impact be made, the following mitigation measure shall be required.

**LRDP EIR Mitigation Measure 4.7-1(c)** - Prior to design approval, the Campus in consultation with the CDFG and/or the USFWS, shall prepare and implement a mitigation plan, in accordance with any applicable State and/or Federal statutes or laws, that reduces impacts to a less-than-significant level.

**LRDP EIR Mitigation Measure 4.7-3(a)** - The Campus shall continue to monitor the area around the Medical Sciences Complex for the presence or absence of burrowing owls.

**LRDP EIR Mitigation Measure 4.7-3(b)** - The Campus, in consultation with the CDFG, shall conduct a pre-construction breeding-season survey (approximately February 1 through August 31) of proposed project sites during the same calendar year that construction is planned to begin. The survey shall be conducted by a qualified biologist to determine if any burrowing owls are nesting on or directly adjacent to any proposed project site.

If phased construction procedures are planned for the proposed project, the results of the above survey shall be valid only for the season when it is conducted.

**LRDP EIR Mitigation Measure 4.7-3(c)** - During the construction stage, the Campus in consultation with the CDFG, shall avoid all burrowing owl nest sites potentially disturbed by project construction during the breeding season while the nest is occupied with adults and/or young. The occupied nest site shall be monitored by a qualified biologist to determine when the nest is no longer used. Avoidance shall include the establishment of a 300-foot to 500-foot diameter non-disturbance buffer zone around the nest site. Disturbance of any nest sites shall only occur outside of the breeding season and when the nests are unoccupied based on monitoring by a CDFG approved biologist. The buffer zone shall be delineated by highly visible temporary construction fencing.

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

- **LRDP EIR Mitigation Measure 4.7-3(d)** - In addition to the compensation for the loss of Swainson’s hawk foraging habitat identified in the 1994 LRDP EIR Mitigation Measure 4.7-5, the Campus shall also convert either the approximately 55 acres of existing orchards adjacent to Putah Creek at the Russell Ranch or a portion of the 85 acres designated habitat restoration and research area to cover type suitable for burrowing owl nesting habitat.

- **LRDP EIR Mitigation Measure 4.7-4(a)** - The Campus shall conduct a pre-construction or pre-tree pruning or removal survey of trees greater than 30-feet tall (proposed activity) during the raptor breeding-season (approximately March 1 through August 31). The survey 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.

- **LRDP EIR Mitigation Measure 4.7-4(b)** - The Campus shall continue to conduct annual surveys to determine the location of nesting Swainson’s hawks on the Campus. If nesting Swainson’s hawks are found during the survey at a previously unknown location within one-half mile of a project site and not within 100 yards of a previously documented site, the Campus shall, prior to project construction, contact the California Department of Fish and Game to determine the potential for disturbance to nesting Swainson’s hawks and will implement feasible changes in the construction schedule or other appropriate adjustments to the project in response to the specific circumstances.

  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.

- **LRDP EIR Mitigation Measure 4.7-5** - As Agricultural Land and Ruderal/Annual Grassland is converted to Campus development under the 1994 LRDP, the Campus will compensate for the loss of Swainson’s hawk foraging habitat at a 1:1 ratio of acres lost to acres preserved through the implementation of one or a combination of the following methods.

  - Approximately 40 acres of Cropland habitat in the "C" tract adjacent to the Putah Creek Reserve on the West Campus will remain Campus agricultural research uses but will be under land use restrictions that will ensure cropland cover types that are suitable as Swainson's hawk foraging habitat. No incompatible uses such as orchards, vineyard, or development will be allowed in the areas set aside for Swainson’s hawk foraging habitat. However, normal crop rotations may periodically result in unsuitable cover types of annual crops.

  - Approximately 20 acres of land within the North Fork Cutoff that currently support livestock enclosures will be restored to a woodland and grassland habitat.

  - Approximately 55 acres of existing orchards adjacent to Putah Creek at the Russell
Ranch will be removed, converted to a cover type suitable for Swainson's hawk foraging, and added to the Putah Creek Reserve.

- Approximately 85 acres at the Russell Ranch that have been designated as a habitat restoration and research area will include the establishment of cover types that are suitable Swainson's hawk foraging habitat.

- **LRDP EIR Mitigation Measure 4.7-6(a)** - The campus shall conduct a pre-construction breeding season survey of the proposed project site, and within a one-half-mile radius of the site, to determine the presence or absence of any nesting Swainson's hawks.

If any Swainson's hawks are nesting within a one-half-mile radius of the project site, the campus shall, in consultation with CDFG, determine the potential for disturbance to nesting Swainson's hawks and will implement feasible changes in the construction schedule or other appropriate adjustments to the project in response to the specific circumstances.

- **LRDP EIR Mitigation Measure 4.7-6(b)** - The campus shall continue to conduct annual surveys to determine the location of nesting Swainson's hawks on and within ½-mile of the campus. If nesting Swainson's hawks are found during the survey at a previously unknown location within one-half mile of a project site and not within 100 yards of a previously documented site, the University shall, prior to project construction, contact the California Department of Fish and Game to determine the potential for disturbance to nesting Swainson's hawks and will implement feasible changes in the construction schedule or other appropriate adjustments to the project in response to the specific circumstances.

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.

- **LRDP EIR Mitigation Measure 4.7-7** - During the project design stage and as a condition of project approval, the campus shall:

  (a) Conduct a project-specific survey for all potential VELB habitat, including a stem count and an assessment of historic or current VELB use;

  (b) Avoid and protect all potential VELB habitat within a natural open space area where feasible; and

  (c) Where avoidance is infeasible, develop and implement a VELB mitigation plan in accordance with the most current USFWS mitigation guidelines for unavoidable take of VELB habitat pursuant to either Section 7 or Section 10(a) of the Federal Endangered Species Act.

- **LRDP EIR Mitigation Measure 4.7-9(a)** - Implement Mitigation Measures 4.7-1, 4.7-3, 4.7-4, 4.7-5, and 4.7-6.

- **LRDP EIR Mitigation Measure 4.7-9(b)** - The County of Yolo, when implementing the County-
wide Habitat Management Plan, should impose a 1:1 mitigation ratio of habitat preserved to that converted on all development projects within their jurisdiction that convert Agricultural Land and Annual Grassland habitat to urban development.

- **LRDP EIR Mitigation Measure 4.7-10** - Implement Mitigation Measures 4.7-7 (a), (b), and (c).

The mitigation measures listed above are incorporated into the proposed project, and the proposed project, as mitigated, is evaluated in the checklist below.
<table>
<thead>
<tr>
<th>BIOLOGICAL RESOURCES</th>
<th>Potentially Significant Impact</th>
<th>Less Than Significant with Mitigation Incorporated</th>
<th>Impact for which LRDP/Program EIR is Sufficient</th>
<th>Less Than Significant Impact</th>
<th>No Impact</th>
</tr>
</thead>
<tbody>
<tr>
<td>Would the project:</td>
<td></td>
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<td></td>
</tr>
<tr>
<td>a) Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Game or U.S. Fish and Wildlife Service?</td>
<td>☐</td>
<td>■</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
</tr>
<tr>
<td>b) Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations or by the California Department of Fish and Game or US Fish and Wildlife Service?</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>■</td>
</tr>
<tr>
<td>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?</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>■</td>
</tr>
<tr>
<td>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?</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>■</td>
</tr>
<tr>
<td>e) Conflict with any local applicable policies protecting biological resources?</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>■</td>
</tr>
<tr>
<td>f) Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other applicable habitat conservation plan?</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>■</td>
</tr>
</tbody>
</table>
Discussion

a) Special-status species are addressed in the 1994 LRDP Draft EIR on page 4.7-8. For the purposes of the 1994 LRDP EIR, special-status species were defined as those taxa that are listed as threatened or endangered under either the California or Federal Endangered Species Acts, species that are candidates for either state or federal listing, and species afforded protection under the Fish and Game Code of California. Also included, as special-status species are CDFG Species of Special Concern.

Plants

The 1994 LRDP EIR identified that development of annual/ruderal grassland habitat could result in the loss of special-status plant species (Impact 4.7-1). Consistent with 1994 LRDP EIR Mitigation Measure 4.7-1(a), a rare plant survey for special-status species was conducted on May 4, 1998 to determine the impacts of the proposed project. No special-status plant species or potential habitat for special-status plant species were observed on or adjacent to the proposed project site (Jones & Stokes 1998). The project site is a previously disturbed area, consisting primarily of disturbed annual grassland. The flora consists primarily of weedy colonizing species, including Italian ryegrass, foxtail barley, slender wild oats, field bindweed, and bur-clover. Therefore, 1994 LRDP EIR Mitigation Measures 4.7-1(b) and (c) are not required.

Wildlife

Burrowing Owl

The ruderal/annual grassland portion of the proposed project area is considered suitable foraging habitat for burrowing owls because of the open nature of the site and its close proximity to historical and current burrowing owl nest sites. The proposed project would develop approximately 3.6 acres of ruderal/annual grassland habitat and potential burrowing owl nesting and foraging habitat. Development of this burrowing owl habitat was assumed in the 1994 LRDP, and impacts were evaluated in the 1994 LRDP EIR (1994 LRDP EIR Impacts 4.7-3 and 4.7-9).

Nesting burrowing owls have been recorded at various central campus locations since 1981. No information is available on the status of burrowing owls on the central campus prior to 1981. A significant reduction in the number of breeding pairs on the central campus has occurred since 22 pairs were observed in 1981. Only 12 pairs were observed in 1986, and
breeding was not observed on the central campus from 1992 through 1997 (Jones & Stokes 1992-2000).
As described on pages 4.7-15 and 4.7-16 of the 1994 LRDP Draft EIR, the declining population of burrowing owls on the campus persisted longest on the open fields in and around the Health Sciences District. These lands were used for agricultural research, including orchards, until the construction began in the Health Sciences District and the multi-lane SR 113 was established during the early 1960s through the mid-1970s. Undeveloped lands to the east and north of the veterinary and medical schools had been actively farmed for decades, typically for dryland crops such as safflower and oats. As a result of farming practices, the entire area was disced on an annual basis and the dense crops were unsuitable foraging and nesting habitat for burrowing owls during most of the year. More recently, these lands have been managed primarily for weed control, a practice that prevents growth of tall, dense vegetation, keeping it open and potentially suitable for nesting and foraging by burrowing owls. Since at least the mid-1980s, campus management of these fields has considered the presence of burrowing owls. Typical weed control activities include identifying the location of burrows occupied by burrowing owls, mowing the fields once or twice a year away from the burrows, and when needed to keep the habitat open, trimming the vegetation immediately around active burrows with hand equipment. The fields are also managed to control ground squirrels.

Consistent with 1994 LRDP EIR Mitigation Measure 4.7-3(a), the campus has been monitoring the area around the Health Sciences District for burrowing owls. The area surveyed is bordered by SR 113 to the west, Orchard Park to the north, Dairy Road to the east, and the Equestrian Center to the south. Burrowing owls surveys are conducted in accordance with the burrowing owl protocol survey guidelines recommended by the CDFG. From 1992 through 1998, burrowing owl surveys were conducted from February through November so that an opportunity to observe owls during the entire nesting season was possible. Beginning in January 1999, surveys have been conducted approximately once every three weeks. Surveys were conducted on foot during the recommended time of day to locate burrowing owls and potential burrows.

From 1993 through 1996, no burrowing owls were observed in the survey area. In 1997, burrowing owls were observed sporadically between March and November in the field east of the Health Sciences District (south of the project site). Although nesting was not documented in 1997, pellets and white wash were identified at a burrow entrance in March of that year. In 1998, a single pair of burrowing owls nested near the intersection of Garrod Drive and Veterinary Medicine Drive. During 1999, two pairs of burrowing owls nested and fledged young in the fields east of the Health Sciences District. During 2000, two pairs of burrowing owls nested in the same field east of the Health Sciences District (Jones & Stokes Associates 1992-2000). The single pair that was present in Winter 2000-01 has been relocated to artificial burrows in the eastern portion of the field east of the Health Sciences District. Relocation was undertaken in compliance with CDFG as part of the UC Davis Veterinary Medicine Facilities Improvement Project.

The burrowing owl relocation area is located approximately 400 feet south of the proposed project. In addition, ground squirrel control practices on the project site minimize the potential for burrowing owls to establish nests. The location of the owls, however, could change prior to the start of construction. Impacts could result if burrowing owls become established on or near the proposed project site prior to construction. This potentially significant impact was also identified as part of the recently approved Genome and Biomedical
Sciences Facility, Veterinary Medicine Facilities Improvement, Genome Launch Facility, and Unitrans Maintenance Facility projects and was evaluated in the environmental documents prepared for those projects.

The 1994 LRDP EIR acknowledged the potential impact on burrowing owls from development planned in and near the Health Sciences District (1994 LRDP EIR Impacts 4.7-3 and 4.7-9). To ensure that the location of nesting burrows is known at the time of project construction, the campus will continue to implement 1994 LRDP Mitigation Measures 4.7-3 (a) and (b).

If burrowing owls are not identified within 250 feet from the proposed project site during preconstruction or annual surveys, no further mitigation would be required. If burrowing owls are found nesting within 250 feet, construction activities associated with the proposed project could result in nest failure, a potentially significant impact. The following project-specific mitigation measure would be implemented to reduce this impact to a less-than-significant level:

**Project-Specific Mitigation Measure 1.** If burrowing owls are observed within 250 feet of the proposed project site, prebreeding and preconstruction season exclusion measures shall be implemented following CDFG guidelines to preclude burrowing owl occupation of the project site. This shall involve installing artificial nest boxes in fall or winter 2001/2002, closing all ground squirrel burrows, and passively relocating owls by installing one-way exit doors on occupied burrows. In addition, a visual barrier shall be installed along the edge of the construction area to minimize visual disturbance of the owls, and a biological monitor shall visit the site twice weekly during the construction period.

Passive relocation of burrowing owls would be conducted in accordance with the burrowing owl protocol mitigation guidelines recommended by the CDFG. Passive relocation would occur outside the breeding season, once the young have dispersed. An area for relocation would be identified that is in the vicinity of the original burrows but outside the area potentially affected by construction activities. Artificial or natural burrows would be provided in this area at a ratio of 2:1. The previously identified burrowing owls would be given time to relocate to the new burrows on their own. During surveys, inactive burrows would be collapsed. Other burrows with signs of activity would be monitored to ensure that no owls are using the burrows. If an owl is found using the burrow, or is suspected of using a burrow, one-way doors would be left in place for 48 hours to ensure that owls have left the burrow before construction activities begin. These activities would be performed consistent with CDFG guidelines. Implementation of 1994 LRDP EIR Mitigation Measures 4.7-3(a) and (b) and Project-Specific Mitigation Measure 1 would reduce this impact to a less-than-significant level.

The 1994 LRDP EIR, as revised, acknowledged the potential impact on burrowing owls from development planned in and near the Health Sciences District (Impact 4.7-3). Construction of the proposed project would result in the conversion of approximately 3.6 acres of ruderal/annual grassland habitat to developed urban area and the loss of potential burrowing owl nesting and foraging habitat. The conversion of this habitat was included under buildout of the 1994 LRDP. Mitigation for loss of burrowing owl habitat, incorporated as part of the proposed project, includes converting approximately 85 acres of orchards at Russell Ranch to...
habitat suitable for burrowing owl nesting habitat (1994 LRDP EIR Mitigation Measure 4.7-3[d]).

The 1994 LRDP EIR identified that development allowed under the 1994 LRDP would contribute to the cumulative loss of ruderal/annual grassland habitat in the region (Impact 4.7-9). Although 1994 LRDP EIR Mitigation Measures 4.7-9(a) and 4.7-9(b) would be incorporated as part of the proposed project, this cumulative impact would remain significant and unavoidable because implementation of Mitigation Measure of 4.7-9(b) is outside the jurisdiction of the campus to enforce and monitor. This significant and unavoidable impact was adequately analyzed in the 1994 LRDP EIR and fully addressed by the Findings and Overriding Considerations adopted by The Regents in connection with its approval of the 1994 LRDP EIR. There are no changed circumstances since the preparation of these documents that require reanalysis of cumulative impacts.

Swainson’s Hawk

The occurrence of the Swainson’s hawk in and around the campus is well documented. Surveys for Swainson’s hawk nests on the campus and within one-half mile of the central campus have been conducted annually since 1990. The results of these surveys documented over 50 different nest trees on or adjacent to the campus during that period. Most of the Swainson’s hawk nests are located in the Putah Creek riparian corridor. The proposed project would develop approximately 3.6 acres of ruderal/annual grassland potential foraging and nesting habitat. Development of this Swainson's hawk habitat was assumed in the 1994 LRDP, and impacts were evaluated in the 1994 LRDP EIR (1994 LRDP EIR Impacts 4.7-5, 4-7-6, and 4.7-9).

Development of the proposed project would result in the conversion of approximately 3.6 acres of ruderal/annual grassland habitat and the loss of Swainson’s hawk foraging habitat (1994 LRDP EIR Impact 4.7-5). Loss of habitat at this site was anticipated under buildout of the 1994 LRDP. The 1994 LRDP ER identified mitigation measure 4.7-5 to reduce impacts on Swainson’s hawk foraging habitat to a less-than-significant level. This mitigation measure, incorporated as part of the project, compensates for the loss of agricultural land and ruderal/annual grassland habitat at a 1:1 ratio of acres lost to acres preserved.

Four trees used as nest sites by Swainson’s Hawks are located within ½-mile from the project site. The closest nest is located approximately 2,000 feet to the southwest, just east of SR 113 and south of Garrod Drive. All of the nest sites in the vicinity of the proposed project are screened from the project site by existing vegetation and/or structures, are in areas with human activity, and are used by birds that are habituated to the activities in these settings. Due to the distance of the project from the nest sites, the existing screening, and the habituation of birds at the nest sites, no impacts to nesting Swainson’s hawks are anticipated due to construction of the proposed project.

In accordance with 1994 LRDP EIR Mitigation Measures 4.7-6(a) and (b), incorporated as part of the proposed project, the campus would conduct pre-construction surveys beginning in March of the year of construction, which is at the beginning of the nesting season. By conducting presence/absence pre-construction surveys, nesting Swainson’s hawks within one-
half mile of the proposed project would be identified. If a nesting pair were located during the pre-construction surveys, then consultation with CDFG would determine the potential for disturbance. In consultation with CDFG, the campus would implement feasible changes to the project in response to the specific circumstances to mitigate impacts to a less-than-significant level. Incorporation of 1994 LRDP EIR Mitigation Measures 4.7-6(a) and (b) as part of the project would ensure that impacts to nesting Swainson’s hawk and other raptors would be mitigated to a less-than-significant level and no further mitigation is required.

Valley Elderberry

No elderberry plants are located on or adjacent to the project site. Therefore, no impact would occur.

b) The proposed project site consists primarily of non-native grassland that is routinely mowed as part of site management. The project site is not considered a riparian habitat or other sensitive natural community. Therefore, no impact would occur.

c) There are no streams, ponds, or wetlands on the proposed project site. No impact would occur.

d) The project site supports disturbed ruderal/annual grassland habitat and is surrounded by development. There are no streams, ponds, or wetlands on the site. Due to the type of habitat on the site and the uses on adjacent lands, development on the site would not substantially interfere with movement of wildlife or fish or impede the use of nursery sites. Therefore, no impact would occur.

e) The proposed project would remove a few ornamental trees established along the current bicycle path alignment. However, the proposed project, including removal of these trees, would not conflict with any local applicable policies protecting biological resources. No impact would occur.

f) As discussed in Item 1c, the proposed project site is not included in any conservation plan and therefore would not conflict with any policies, ordinances, or adopted habitat conservation plans. No impact would occur.

g) Standards of significance for biological resources impacts that were used in preparation of the 1994 LRDP EIR are presented earlier in this section. These standards are consistent with the biological resources questions in the current Environmental Checklist. As discussed above, with the incorporation of 1994 LRDP EIR and project-specific mitigation measures, the proposed project would not exceed the standards of significance identified in the 1994 LRDP EIR and would not result in new significant impacts related to biological resources that were not previously analyzed in the 1994 LRDP EIR.

Summary

The proposed project could result in one new potentially significant impact related to burrowing owls. Project-Specific Mitigation Measure 2 and 1994 LRDP EIR Mitigation Measures 4.7-1(a),
4.7-3(a)-(d), 4.7-4(a) and (b), 4.7-5, 4.7-6(a) and (b), 4.7-9(a)-(b), and 4.7-10 will be implemented as part of the project. No additional mitigation is required.
9. Hydrology and Water Quality

Background

Putah Creek, the principal stream course in the Davis region, flows along the southern boundary of the Russell Ranch property and the west campus. The entire flow of Putah Creek is diverted to the South Fork of Putah Creek west of the I-80/SR 113 intersection. The historical North Fork of Putah Creek (currently the Arboretum Waterway) is east of SR 113 on the central campus and is separated from its former channel by levees, SR 113, the Union Pacific Railroad Tracks, and I-80. The 100-year flood plain in the campus is generally located along the North Fork, South Fork, and historical North Fork channels. A portion of the west campus along County Road 98 is also subject to inundation during a 100-year storm event and is designated as a flood hazard zone by the Federal Emergency Management Agency (FEMA) (see Figure 4.8-2 on page 4.8-4 of the 1994 LRDP Draft EIR).

The South Fork of Putah Creek receives treated effluent discharge from the new campus Wastewater Treatment Plant. The plant, which began operation in March 2000, is more reliable to operate than the outdated treatment system that was in use when the 1994 LRDP and 1994 LRDP EIR were prepared.

The existing storm water drainage system on campus consists of collectors, pump stations, transmission mains, and the Arboretum Waterway. Storm drainage from the central campus is discharged to the Arboretum Waterway, which serves a storm water retention basin for the central campus. Rainfall overflow is pumped into the South Fork of Putah Creek during large storm events.

The campus is underlain by the Lower Cache-Putah Basin, which is divided by relatively impervious soil layers into shallow/intermediate and deep aquifers. Domestic and fire water for the campus is drawn from wells in the deep aquifer (located up to 1,500 feet below the ground surface). Utility water is used primarily for landscape irrigation and is drawn from wells in the shallow/intermediate aquifer (200 to 600 feet below the ground surface). Groundwater underlying the campus is generally high in mineral content and is considered good quality for agricultural use and adequate quality for municipal use.

1994 LRDP EIR Standards of Significance

The environmental analysis provided in the 1994 LRDP EIR considered an impact to hydrology and water quality significant if campus or regional growth would:

- expose faculty, staff, students or visitors to flood hazards by being located within the 100-year flood plain as defined by the Federal Emergency Management Agency;
- result in substantial changes in absorption rates, drainage patterns, or the rate and amount of surface runoff which cause existing drainage capacity to be exceeded;
• substantially interfere with groundwater recharge; or
• substantially degrade surface and/or groundwater quality due to increases in sediments, erosion and contaminants generated by construction and/or implementation of the 1994 LRDP.

1994 LRDP EIR Significant Impacts and Mitigation Measures

Significant impacts identified in the 1994 LRDP EIR that are relevant to the proposed project are presented in the following table. The levels of significance before and after application of mitigation measures identified in the 1994 LRDP EIR are also presented. Impacts of campus growth through year 2005-06 on hydrology and water quality were addressed in Sections 4.8 (Hydrology and Water Quality) and 4.14 (Utilities and Infrastructure) of the 1994 LRDP Draft EIR. Cumulative hydrology and water quality impacts were reevaluated in the WWTP Replacement Project EIR, but no changes were made to the 1994 LRDP EIR impacts, mitigation measures, or levels of significance. Updates and revisions to the 1994 LRDP EIR are summarized in Appendix A of this document. The proposed project is within the scope of the analysis presented in the 1994 LRDP EIR as reevaluated in the WWTP Replacement Project EIR, and there are no changed circumstances since the preparation of these documents that require major revisions of the cumulative analysis. Please note that cumulative regional impacts 4.8-8 and 4.8-9 include mitigation measures to reduce the impacts to less-than-significant levels. However, these impacts are identified as significant and unavoidable because the University of California can not guarantee implementation of a mitigation measure that is not within its jurisdiction to enforce and monitor. Impacts 4.14-1 and 4.14-11 also include measures to reduce the magnitude of the impacts. However, due to the unknown significance of these impacts, the impacts remain significant and unavoidable.

<table>
<thead>
<tr>
<th>LRDP EIR IMPACT</th>
<th>Level of Significance Prior to Mitigation</th>
<th>Level of Significance after/with Mitigation</th>
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</thead>
<tbody>
<tr>
<td>4.8-2 New impervious surfaces associated with development allowed under the 1994 LRDP would increase surface runoff, and could exceed existing drainage capacity and result in localized flooding.</td>
<td>S</td>
<td>LS</td>
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<tr>
<td>4.8-3 New impervious surface associated with development allowed under the 1994 LRDP could reduce the potential for groundwater recharge.</td>
<td>S</td>
<td>LS</td>
</tr>
<tr>
<td>4.8-4 Increased siltation and sedimentation generated during construction activities associated with development allowed under the 1994 LRDP could adversely affect receiving water quality.</td>
<td>S</td>
<td>LS</td>
</tr>
<tr>
<td>4.8-5 Increased runoff from additional impervious surfaces associated with development allowed under the 1994 LRDP could result in sedimentation and increased levels of urban contaminants that could adversely affect receiving water quality.</td>
<td>S</td>
<td>LS</td>
</tr>
<tr>
<td>4.8-6 Increased flows to the campus Wastewater Treatment Plant due to development allowed under the 1994 LRDP would generate increased</td>
<td>S</td>
<td>LS</td>
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<tr>
<td>LRDP EIR IMPACT</td>
<td>Level of Significance Prior to Mitigation</td>
<td>Level of Significance after/with Mitigation</td>
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<tr>
<td>discharge of treated effluent into the South Fork of Putah Creek which could adversely affect receiving water quality.</td>
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Mitigation measures in the LRDP EIR that are applicable to the proposed project and that will be required as part of project implementation include the following:

- **LRDP EIR Mitigation Measure 4.8-2(a)** - Prior to approval of final project design, the campus shall prepare detailed drainage study to evaluate each specific development project under the 1994 LRDP to determine if project runoff would exceed the capacity of the existing campus storm drainage system.

- **LRDP EIR Mitigation Measure 4.8-3** - The campus shall incorporate where feasible as part of project design the following measures, or equally effective measures, to maximize percolation and infiltration of precipitation into the underlying groundwater aquifers:
  
  (a) the use of pervious paving material; or
  
  (b) preservation and utilization of natural drainage areas.

- **LRDP EIR Mitigation Measure 4.8-4(a)** - If project construction includes the disturbance of five acres or more of land, the campus shall include in all construction contracts a requirement that campus contractors file a Notice of Intent for coverage under the State General Construction Activity Storm Water Permit. The contractor shall comply with applicable permit requirements.

The 1994 LRDP EIR further states: Compliance with the Permit would require the implementation of Best Management Practices (BMPs). BMPs include schedules of activities, prohibitions of practices, maintenance procedures, and other management practices to prevent or reduce pollution (i.e. straw bale dikes, silt fences, sediment traps, or similar methods)

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**LRDP EIR IMPACT**

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<tr>
<td>Significance Prior to Mitigation</td>
<td>Significance after/with Mitigation</td>
</tr>
<tr>
<td>4.8-8  Urban and agricultural development allowed under the 1994 LRDP in the Putah Creek watershed, including the campus, could reduce receiving water quality.</td>
<td>SU</td>
</tr>
<tr>
<td>4.8-9 Development allowed under the 1994 LRDP, in combination with cumulative development in the Lower Cache-Putah Groundwater Basin, would increase the amount of impervious surface and reduce groundwater recharge potential.</td>
<td>SU</td>
</tr>
<tr>
<td>4.14-1 Development allowed under the 1994 LRDP would directly increase the demand for water supplied from the deep aquifer.</td>
<td>SU</td>
</tr>
<tr>
<td>4.14-11 Cumulative development allowed under the 1994 LRDP would result in increased demand for water from the deep aquifer.</td>
<td>SU</td>
</tr>
</tbody>
</table>

Levels of Significance: SU = Significant and Unavoidable; PS = Potentially Significant; S = Significant; LS = Less than Significant
• **LRDP EIR Mitigation Measure 4.8-5(a)** – The campus shall ensure that project design includes a combination of the following Best Management Practices (BMPs), or equally effective measures:

  (i) Reduction of the area and length of time that the site is cleared and graded.

  (ii) Revegetation/stabilization of cleared areas as soon as possible.

  (iii) Peak flow reduction and infiltration practices, such as grass swales, infiltration trenches and grass filter strips shall be incorporated.

  (iv) Storm drain inlets shall be labeled to educate the public of the adverse impacts associated with dumping in receiving waters (i.e. “Don’t dump! Drains to creek”).

  (v) Landscape areas, including borders shall use warm season grasses and drought tolerant vegetation wherever feasible to reduce demand for irrigation and thereby reducing irrigation runoff.

  (vi) Efficient irrigation shall be installed in landscaped areas to minimize runoff and evaporation and maximize the water that will reach the plant roots. Such irrigation systems include drip irrigation, soil moisture sensors, and automatic irrigation systems.

• **LRDP EIR Mitigation Measure 4.8-6(a)** – The campus shall continue to monitor effluent discharge, in compliance with WDR Order No. 92-040, from the wastewater treatment plant to identify any exceedances of established WDR effluent limits.¹

• **LRDP EIR Mitigation Measure 4.8-6(b)** – If the effluent limits established in WDR Order No. 92-040 are exceeded, and action is required by the CVRWQCB, the campus shall make modifications to the pretreatment program to ensure compliance with established effluent limits.¹

• **LRDP EIR Mitigation Measure 4.8-8(a)** – Implement Mitigation Measures 4.8-4(a) and (b), 4.8-5(a) and (b) and 4.8-6(a) through (c).

• **LRDP EIR Mitigation Measure 4.8-8(b)** – When the EPA adopts NPDES Municipal Storm Water Permit requirements for small municipalities, local jurisdictions in the Putah Creek Watershed would apply for, obtain, and implement a NPDES Municipal Storm Water Permit in accordance with EPA requirements.

• **LRDP EIR Mitigation Measure 4.8-8(c)** – Comprehensive Storm Water Pollution Prevention Plans and monitoring programs would be implemented by all storm water dischargers associated with specific industrial and construction activities, in compliance with the State’s General Permits. Such plans shall include Best Management Practices or equally effective measures.

¹ In 1997, WDR Order No. 90-040 was superseded by WDR Order No. 97-236.
• **LRDP EIR Mitigation Measure 4.8-9(a)** - Implement Mitigation Measure 4.8-3(a) and (b).

• **LRDP EIR Mitigation Measure 4.8-9(b)** - Jurisdictions in the Lower-Cache Putah Creek Groundwater Basin should encourage development to be accomplished in a manner that would maximize percolation and infiltration of precipitation into the underlying groundwater aquifers through the use of pervious paving materials, cluster development, retention of natural drainage areas, and identification and retention of flood plains and areas of high recharge potential.

• **LRDP EIR Mitigation Measure 4.14-1(a)** - The campus shall ensure that each project is designed to include the following domestic water conservation measures:

  (i) Low-flow showerheads (2.0 gpm or less) shall be installed in all new showers.

  (ii) Toilets with low-water-use flush devices (with average savings of 1 gallon per flush) shall be installed in all new facilities and existing facilities should be retrofitted at a pace at least equal to new development.

• **LRDP EIR Mitigation Measure 4.14-11** - Implement Mitigation Measures 4.14-1(a) and (b).

• **LRDP EIR Mitigation Measure 4.14-3(a)** - The campus shall ensure that each project is designed to include the following utility water conservation measures:

  (i) landscape, where appropriate, with native, drought-resistant plants, drip irrigation systems;

  (ii) apply heavy applications of mulch to landscaped areas to reduce evaporation; and

  (iii) use treated wastewater for landscape irrigation where feasible.

• **LRDP EIR Mitigation Measure 4.14-3(b)** - The campus shall continue to monitor the groundwater elevations at its existing wells to ascertain whether any long-term storage depletion of the shallow/intermediate aquifer is due to UC Davis activities.

The mitigation measures listed above are incorporated into the proposed project, and the proposed project, as mitigated, is evaluated in the checklist below.

<table>
<thead>
<tr>
<th>HYDROLOGY AND WATER QUALITY</th>
<th>Potentially Significant Impact</th>
<th>Less Than Significant with Mitigation Incorporated</th>
<th>Impact for which LRDP/Program EIR is Sufficient</th>
<th>Less Than Significant Impact</th>
<th>No Impact</th>
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<tr>
<td>Would the project:</td>
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<td>Would the project:</td>
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<td>a) Violate any water quality standards or waste discharge requirements?</td>
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<td>☐</td>
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<td>b) Substantially deplete groundwater supplies or interfere substantially with groundwater recharge such that there would be a net deficit in aquifer volume or a lowering of the local groundwater table level (e.g., the production rate of pre-existing nearby wells would drop to a level which would not support existing land uses or planned uses for which permits have been granted)?</td>
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<td>c) Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, in a manner which would result in substantial erosion or siltation on- or off-site?</td>
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<td>d) Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, or substantially increase the rate or amount of surface runoff in a manner, which would result in flooding on- or off-site?</td>
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<td>e) Create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff?</td>
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<td>f) Otherwise substantially degrade water quality?</td>
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<td>g) Place housing within a 100-year flood hazard area as mapped on a federal Flood Hazard Boundary or Flood Insurance Rate Map or other flood hazard delineation map?</td>
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Would the project:

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<tr>
<td>h) Place within a 100-year flood hazard area structures, which would impede or redirect flood flows?</td>
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<td>i) Expose people or structures to a significant risk of loss, injury or death involving flooding, including flooding as a result of the failure of a levee or dam?</td>
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<td>j) Inundation by seiche, tsunami, or mudflow?</td>
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<td>k) Exceed an applicable LRDP or Program EIR Standard of Significance?</td>
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Discussion

a) Stormwater runoff from the proposed project site currently drains into the Arboretum Waterway. From there, stormwater is pumped into the South Fork of Putah Creek. Putah Creek, the principal stream course in the Davis region, flows along the southern boundary of the Russell Ranch property and the west campus. The entire flow of Putah Creek is diverted to the South Fork of Putah Creek west of the I-80/SR 113 intersection. During construction and after the project is completed, the site would continue to drain to the same location.

Construction

Construction of the proposed project would include temporary earth disturbing activities, such as grading and excavation, which could result in increased rates of soil erosion leading to increased sediment loads in stormwater runoff. This would adversely affect receiving water quality. Soils underlying the project site (Yolo and Reiff series) are characterized as having minimum erosion potential (see Figure 4.9-1 on page 4.9-6 of the 1994 LRDP EIR and the discussion under Items 10b and 10c of this checklist).

Approximately 3.6 acres would be graded for site preparation of the proposed project. The 1994 LRDP EIR identified that construction activities associated with development allowed under the 1994 LRDP could increase siltation and sedimentation and adversely affect receiving water quality (Impact 4.8-4). However, due to the low erosion potential of soils on the proposed project site, the potential for construction-related water quality impacts is minimal. Construction activity associated with the proposed project would be covered under a National Pollutant Discharge Elimination System (NPDES) state-wide General Permit for Discharge of Storm Water Associated with Construction Activity. As part of a recent agreement with the Central Valley Regional Water Quality Control Board, the campus has filed for coverage under the General Permit for the entire Davis campus. As part of this permit, the project's contractor would prepare and implement a project-specific storm water pollution prevention
plan for construction activities associated with the proposed project. This would further reduce potential construction-related surface water quality impacts to less-than-significant levels.

**Operation**

Approximately three acres of new impervious surfaces would be created by the proposed project. This would increase the volume of surface water runoff, which could contribute to increased sediment and urban contaminant loads in the Arboretum Waterway and Putah Creek. The primary sources of storm water pollution associated with the proposed project would be oil, grease, heavy metals, and sediments from the proposed parking area. In addition, landscape irrigation from the project's approximately 0.6 acre of softscape grounds could contribute sediments, nutrients (from fertilizers), pesticides, and herbicides to storm water runoff. However, use of fertilizers, pesticides, and herbicides in campus landscaping activities is being reduced from past use (Mezger 2001).

The 1994 LRDP EIR identified that increased runoff from additional impervious surfaces associated with development allowed under the 1994 LRDP could result in sedimentation and increased levels of urban contaminants in receiving water (Impact 4.8-5). 1994 LRDP EIR Mitigation Measure 4.8-5(a), incorporated as part of the proposed project, would reduce the project's operational impact on receiving waters to a less-than-significant level.

The 1994 LRDP EIR concluded that cumulative effects of urban and agricultural development in the Putah Creek Watershed could reduce receiving water quality of Putah Creek (Impact 4.8-8). 1994 LRDP EIR Mitigation Measures 4.8-8 (a) through (c) were identified to reduce this impact to a less-than-significant level, but the impact is considered significant and unavoidable because the University of California cannot guarantee implementation of 4.8-8 (b), which fall within other jurisdictions to enforce and monitor. The proposed project would contribute to, but not exceed, the cumulative urban development identified in the 1994 LRDP. This significant and unavoidable impact was adequately analyzed in the 1994 LRDP EIR and fully addressed by the Findings and Overriding Considerations adopted by The Regents in connection with its approval of the LRDP EIR, as amended. There are no changed circumstances since the preparation of these documents that require reanalysis of cumulative impacts.

Wastewater from the proposed project would be treated at the campus WWTP, and then discharged to the South Fork of Putah Creek. The 1994 LRDP EIR recognized that increased flows to the WWTP due to development allowed under the 1994 LRDP would increase discharge of treated effluent into the South Fork of Putah Creek, which could adversely affect water quality (Impact 4.8-6).

1994 LRDP EIR Mitigation Measure 4.8-6 (a) requires continued monitoring of WWTP effluent discharge. Mitigation Measure 4.8-6 (b) requires, in the event that effluent limits are exceeded, the campus will make modifications to the pretreatment program to ensure compliance. 1994 LRDP EIR Mitigation Measures 4.8-6 (a) and (b) are incorporated as part of
Copper

Effluent testing from the campus WWTP for the final quarter of 2000 (December 2000) detected copper in excess of the WWTP's NPDES permit limit. The copper permit limit is 13 parts per billion (ppb), and the results of December 2000 sampling indicated copper concentrations of 16 ppb in the WWTP effluent. The previous sampling of effluent from the new WWTP, which opened in March 2000, indicated that the WWTP was in compliance with all permit limits, including copper (copper concentrations were 5.4 ppb in June 2000 and 10 ppb in September 2000).

The circumstances surrounding effluent testing for the first quarter of 2001 (March 2001) were not typical. Effluent testing from one testing laboratory (that was experiencing several problems with its equipment) showed results for several parameters that were orders of magnitude higher than any other results the campus has experienced. This laboratory found copper levels of 14 ppb, just over the 13 ppb effluent limit. The same samples were sent to another certified laboratory and these results showed copper was non-detect (less than 5 ppb). Both sets of results were reported to the Regional Water Quality Control Board for evaluation. Under the standard permit provisions, the average concentration is used to evaluate permit compliance in situations like this. Therefore, given the average of these two results, the WWTP was in compliance with the permit limits for the first quarter of 2001.

Results from the second quarter of 2001 for samples collected in June showed compliance, though just barely, with the permit limits for copper. The 1-hour average result was 14 ppb, compared to the permit limit of 20 ppb, and the 4-day average result was 13 ppb, compared to the permit limit of 13 ppb.

Consistent with CEQA, an EIR was prepared for the new campus WWTP that began operation in March 2000 (WWTP Replacement Project Draft EIR, October 1996, and Final EIR, March 1997). The WWTP Replacement Project EIR stated that, “continued discharge of treated effluent into the South Fork of Putah Creek could result in potential water quality degradation because of the presence of toxic pollutants in the WWTP effluent” (WWTP Draft EIR page 4.1-54). Consistent with the 1994 LRDP EIR, this impact was considered potentially significant. To reduce this impact to a less-than-significant-level, the following mitigation measures were adopted (WWTP Final EIR page 2-3) in addition to 1994 LRDP EIR mitigation measures.

4.1-6(a) The Campus shall strictly implement the pretreatment program and aggressively enforce the local limits to reduce pollutant concentrations and ensure the NPDES permit limits would be met. Implementation of the pretreatment program to ensure that local limits are met will include monitoring, inspection of facilities, education, and enforcement, all as described above in “Regulatory Setting”, in Appendix E [of the WWTP Replacement Project Draft EIR], and in the UC Davis WWTP Final Local Limits Report Krieger and Stewart 1995) or subsequent updates.
The Campus will modify the operation and/or treatment processes at the new WWTP as necessary to comply with all applicable permit conditions related to toxics that are in the final NPDES permit for the new WWTP.

As required by the monitoring programs in both the previous and current WWTP Waste Discharge Requirements (WDRs), and consistent with the 1994 LRDP EIR and WWTP mitigation measures, the campus has monitored WWTP effluent on a quarterly basis.

Between March 1998 and through the first quarter of 2000, the copper concentration in effluent from the old WWTP averaged 33 ppb with a maximum concentration of 59 ppb (Phillips 2001b). The results of toxicity testing using bioassays in 100 percent raw effluent show discharge from the old plant generally met or exceeded EPA standards1.

A yearlong toxicity study of the Cache Creek and Putah Creek watersheds (1998-99) included sampling stations upstream and downstream of the old campus WWTP discharge to Putah Creek and included samples of 100 percent effluent from the old WWTP (California Regional Water Quality Control Board 2000). The study concluded that the minor levels of toxicity detected in the Putah Creek Watershed were associated with watershed-wide events not related to discharge from the UC Davis WWTP. This study was coordinated with self-monitoring performed at the old WWTP, which indicated there was no toxicity to any of the test species during the study period.

Through three quarters of effluent sampling at the new WWTP, copper concentrations in effluent have been much lower than from the old WWTP, averaging 10 ppb with a maximum of 16 ppb in the December 2000 sample.

In response to the December 2000 copper exceedance, and consistent with the 1994 LRDP EIR and WWTP Replacement Project EIR mitigation measures, the campus has taken several steps to bring copper concentrations into compliance with the permit limit. These steps (listed below) include strictly enforcing the pretreatment program and aggressively enforcing local limits by identifying and removing sources of copper to wastewater where feasible.

- Campus sewer disposal policies were changed in February 2001 to lower the local limit to zero and completely prohibit the discharge of any wastewater containing added copper that is generated by campus users.

- Staff from EH&S performed an audit of campus departments that maintain significant quantities of copper in their laboratories to ensure that all waste is being properly disposed.

- Staff at the campus WWTP are working with campus wastewater researchers, faculty, and outside professional engineers (Brown and Caldwell Environmental Engineering and Consulting) to identify whether operations at the WWTP can be modified to enhance the removal of copper during treatment.

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1 UC Davis Wastewater Treatment Plant self-compliance monitoring reports, using Ceriodaphnia, fathead minnow larvae, and algae.
The campus retained the services of a firm that specializes in source control studies (Larry Walker Associates) to identify enhancements to the pretreatment program to reduce copper loadings.

The results of the EH&S audit of departments that maintain significant quantities of copper to date have indicated that nearly all campus copper users are properly collecting and disposing of their wastes. However, the survey identified several users that historically discharged wastewater containing copper but now handle copper waste appropriately.

The evaluation of methods to reduce copper concentrations in effluent from the WWTP, prepared by Brown and Caldwell (February 2001), concluded that:

- Limited data available from the new WWTP are not sufficient to conclude that copper concentrations are increasing with time. Trace metal concentrations in wastewater are variable particularly from a source as diverse as UC Davis.

- Improved effluent sampling and analysis techniques are needed. The methodology used to collect and analyze effluent samples at the new WWTP may be generating samples that are artificially high in copper levels. The two-person clean sampling method (EPA Method 1669) should be used to collect all compliance samples. This method ensures a more representative sample and reduces the potential for contamination. EPA has generated data showing that clean sampling can result in lower concentrations. Improved analysis techniques would distinguish between particulate copper and copper in solution. The existing methodology used by the campus does not distinguish between these forms of copper.

- Potential localized sources of contamination at the effluent monitoring point should be removed because they could bias the compliance samples. Metal structures are present in the vicinity of the sampling point and should be evaluated as a potential source of contamination of the compliance samples.

- Chemical treatment methods could be added to the WWTP processes to remove copper. Ferric chloride could be added to raw sewage from the headworks. Ferric chloride and sodium sulfide could be added to the solids storage basin supernatant. Pilot programs are recommended to test the efficacy of these methodologies. If they are effective, and if source control and improved sampling and analysis methods don’t reduce copper levels below permit limits, then these or other chemical treatment methods would be implemented.

- Wetlands could be constructed to polish effluent before it is discharged to Putah Creek. If measures described above are not sufficient to bring the WWTP into compliance for copper, a pilot wetland project could be used to evaluate whether this method would be feasible for reducing copper concentrations.

In response to Brown and Caldwell’s conclusions, the campus has modified its sampling techniques to ensure a more representative sample and reduce localized sources of contamination. In addition, the campus recently initiated a project to test the addition of
ferric chloride to the wastewater to improve copper removal. Results from jar tests will be available in the near future. Based on these results, full-scale testing will be initiated to optimize removal of copper by the WWTP.

The Larry Walker Associates source control evaluation concluded that a major potential source of copper in the WWTP effluent is corrosion of copper pipes (Larry Walker Associates 2001). The study noted that replacing existing copper pipes and using alternative materials in new construction is not considered feasible. The study states that reducing velocities and temperatures in hot water circulating systems may reduce copper loadings and should be evaluated by the campus. The campus will implement this recommendation if efficacious and feasible, and if needed after implementing other recommendations described above.

The Larry Walker Associates study also identified the Unitrans Bus Maintenance Facility, the UC Davis Fleet Services garage, and other miscellaneous facilities, as potential sources of copper discharge that should be evaluated to ensure standard best management practices are being implemented. Consistent with these findings, the campus has evaluated copper discharges from Art Department buildings and the Unitrans Maintenance Facility. In response to these evaluations, the campus is developing best management practices for the Art Department and has incorporated an improved sewer oil/water separator system into the recently approved Unitrans Maintenance Facility Expansion Project.

Implementation of the above described measures by the campus, previously adopted as mitigation measures and identified in the 1994 LRDP EIR and the WWTP Replacement Project EIR, will reduce the copper concentration in WWTP effluent to within the permit limit. No new significant impacts have been identified and no new mitigation measures are required.

The proposed project includes no special characteristics that would make it an atypical contributor of copper to the wastewater received at the WWTP due either to its design or the operation of the facility. The project would be required to comply with the campus pretreatment program, thus no copper containing compounds would be discharged to the sanitary sewer system from the proposed project. Therefore, as for most other campus buildings, the likely source of copper from the proposed project would be corrosion of copper pipes.

If the concentration of copper in wastewater from future projects averages the same as that currently entering the plant, no change in effluent concentrations would occur. Unless a new project is an extremely large source of copper entering the WWTP, the effect of the new project on copper concentrations in effluent levels would be de minimis. If future projects discharge at copper concentrations lower than current average levels, the cumulative effect would be to slightly decrease copper concentration in effluent at the WWTP effluent. If several new large projects discharge to the WWTP with copper levels twice current influent concentrations, copper concentration in effluent at the WWTP would increase by only 1 ppb (Phillips 2001).

As identified in 1994 LRDP EIR and WWTP Replacement Project EIR mitigation measures, source control and modification of treatment processes at the WWTP are the correct methods to use to ensure the plant meets discharge limits and will reduce the impact of copper concentrations in WWTP effluent on water quality to a less-than-significant level. Because the
proposed project will not be an atypical source of copper, it would not contribute to an increased exceedence of the permit limit for copper in effluent and would make a small contribution to the concentration of copper in WWTP effluent. No additional mitigation measures are required to address project-level and cumulative water quality impacts of increased discharges of wastewater to the WWTP.

Therefore, the proposed project would not result in any discharges that would violate water quality standards and a less-than-significant impact would occur.

b) The campus is underlain by the Lower Cache-Putah Basin, which is divided by relatively impervious soil layers into shallow/intermediate and deep aquifers. Both aquifers are used regionally for domestic, municipal, agricultural and industrial uses with wells being sunk to depths from 50 to 1,500 feet below the ground surface.

**Groundwater Recharge**

Approximately three acres of impervious surfaces would be created by the proposed project. This small addition would not lead to a measurable reduction in aquifer recharge. In addition, the 1994 LRDP EIR noted that "in the central campus much of the land area is already developed and the infill development proposed would not significantly reduce the potential for groundwater recharge" (page 4.8-18 in the 1994 LRDP Draft EIR). However, the 1994 LRDP EIR did conclude that the increase in impervious surface associated with development allowed under the 1994 LRDP could reduce the potential for groundwater recharge (Impact 4.8-3). Implementation of 1994 LRDP EIR Mitigation Measure 4.8-3, incorporated as part of the project, would reduce this impact to a less-than-significant level. An effort will be made to minimize impervious surfaces during project design. Storm water drainage would be channeled, where possible, through swales and over other pervious surfaces to filter runoff and maximize percolation. No further mitigation is required.

The 1994 LRDP EIR concluded that development allowed under the 1994 LRDP, in conjunction with other regional development in the Lower Cache-Putah Creek Groundwater Basin, would increase the amount of impervious surface coverage and reduce groundwater recharge potential (Impact 4.8-9). Although Mitigation Measures 4.8-9 (a) and (b), incorporated into the proposed project, would reduce the magnitude this impact, the impact would remain significant and unavoidable because the University of California can not guarantee implementation of 1994 LRDP EIR Mitigation Measure 4.8-9 (b), which is not within the jurisdiction of the University to enforce and monitor. The proposed project would contribute to, but not exceed, the increase in impervious surface cover identified under the 1994 LRDP. This significant and unavoidable impact was adequately analyzed in the LRDP EIR and addressed by the Findings and Overriding Considerations adopted by The Regents in connection with its approval of the 1994 LRDP EIR. There are no changed circumstances since the preparation of these documents that require reanalysis of cumulative impacts.

**Deep Aquifer**

The campus domestic/fire water system uses wells that draw from the deep aquifer. The proposed project would result in an increase domestic water demand. The Draft UC Davis
Domestic Water Master Plan (West Yost 2000a) updated 1994 LRDP DEIR water use projections and assumptions. The Master Plan identified that increased development under the 1994 LRDP would increase campus demand for water from the campus domestic/fire water system to approximately 1,080 million gallons per year (mgy) by 2005-06. According to conservative assumptions identified in the Master Plan for mixed use facilities (314 gallons per year per asf), the Aquatics Center's support building (4,455 asf) would use approximately 1.4 million gallons per year. The Aquatics Center's pool would be filled with water from the deep aquifer. The pool would initially be filled, would be partially or fully drained throughout the year to allow for maintenance operations, and would be filled as needed to compensate for evaporation and water loss from swimmers (splashing, etc.). Total pool volume would be approximately 1.2 million gallons. Assuming a worst-case scenario, emergency maintenance operations would drain and refill the pool a total of two full pool volumes each year (requiring 2.4 million gallons). According to University of California statewide Integrated Pest Management Project evaporation and precipitation averages for a period from 1961 to 1990, on the average, approximately 0.7 mgy would be required to refill the pool due to evaporation (IPM 1990). Assuming that water lost due to swimmers and evaporation are similar (both approximately 0.7 mgy), it is estimated the pool would require a total of approximately 3.8 mgy of water from the deep aquifer. In total, the project (support building and pool) would use approximately 5 mgy of water from the campus domestic/fire water system, an amount that is well within the water use projected for 2005-06. Recent water use statistics estimate domestic water use in 1999 was approximately 818 mgy. Incremental growth from 1999 to 2005-06 is projected at approximately 262 mgy. The proposed project would contribute to, but not exceed, this growth.

As stated on page 4.14-11 of the 1994 LRDP Draft EIR:

The limited existing data regarding groundwater elevations and the capacity of the deep aquifer cannot be used to conclude that the aquifer is capable of recharging. On the other hand, there is no evidence of any long-term groundwater depletion. The actual magnitude of the significance of the impact is unknown, because the status of the aquifer cannot be determined with available information. To ensure that this EIR takes a conservative approach, the EIR assumes that the impact is significant and unavoidable.

The proposed project would incrementally contribute to, but not exceed, the increased deep aquifer demand identified in the 1994 LRDP EIR (Impact 4.14-1). Although implementation of 1994 LRDP EIR Mitigation Measure 4.14-1 (a), incorporated as part of the proposed project, would reduce the magnitude of the project's contribution to this impact, the impact would remain significant and unavoidable. This impact was adequately analyzed in the 1994 LRDP EIR, and addressed in the Findings and Overriding Considerations adopted by The Regents in connection with its approval of the 1994 LRDP and certification of the 1994 LRDP EIR. There are no changed circumstances since the preparation of these documents that require reanalysis of cumulative impacts.

The 1994 LRDP EIR, as amended, concluded that cumulative growth allowed under the 1994 LRDP, in conjunction with regional growth, would result in increased demand for water from the deep aquifer, considered a significant and unavoidable impact (Impact 4.14-11). The proposed project would contribute to, but not exceed, domestic water demand from the deep aquifer assessed in the 1994 LRDP EIR. Although implementation of 1994 LRDP EIR
Mitigation Measure 4.14-11, incorporated as part of the proposed project, would reduce the magnitude of this impact, it would remain significant and unavoidable. This significant and unavoidable impact was adequately analyzed in the 1994 LRDP EIR and was addressed by the Findings and Overriding Considerations adopted by The Regents in connection with its approval of the 1994 LRDP and certification of the 1994 LRDP EIR. There are no changed circumstances since the preparation of these documents that require reanalysis of cumulative impacts. As discussed in section 4.14 (Utilities and Service Systems) of this Environmental Checklist, the project level impact on the campus domestic/fire water system would be reduced to a less-than-significant level.

**Shallow/Intermediate Aquifer**

The proposed project would include approximately 0.6 acre of softscape grounds that would require irrigation. The campus relies on the shallow/intermediate aquifer to provide irrigation water on the central campus. The irrigation water required for landscaping associated with the proposed project is not anticipated to result in a significant change in the quantity of groundwater in the shallow/intermediate aquifer. The 1994 LRDP EIR considered the impact to the shallow/intermediate aquifer as a result of development allowed under the 1994 LRDP less-than-significant (Impact 4.14-3) because aquifer monitoring data did not exhibit a declining trend. Although not required, implementation of 1994 LRDP EIR Mitigation Measure 4.14-3 (a), incorporated as part of the project, would ensure that the project includes utility water conservation measures. This measure would further reduce utility water demand and associated impacts on the shallow/intermediate aquifer.

Consistent with 1994 LRDP EIR Mitigation Measure 4.14-3 (b), Facilities Services measures static water levels in all utility wells in the fall and spring of each year. This information, in addition to other groundwater monitoring and pumping and precipitation data, is used to help forecast annual water supplies and balance usage between groundwater and surface water. By continuing these actions, impacts to the shallow/intermediate aquifer will remain less-than-significant.

c) Storm water for the proposed project site currently discharges into the South Fork of Putah Creek, via the Arboretum Waterway. The proposed project would not alter the existing drainage pattern and would not result in significant erosion or siltation on- or off-site (as discussed in Item 9a, above). Therefore, no impact would occur.

d) As described in Item 9a, above, the proposed project would result in an increase in surface runoff associated with increased impervious surfaces. The increase in surface runoff associated with the proposed project would not result in increase in the total amount of surface runoff over that anticipated and evaluated in the 1994 LRDP EIR and would not result in flooding on- or off-site. The impact is less-than-significant. Impacts to the campus drainage system capacity are evaluated in Item 9e, below.

The proposed project would drain to the existing campus storm drainage system at a point located east of the proposed project site. The 1994 LRDP EIR identified that new impervious surfaces associated with development allowed under the 1994 LRDP would increase surface runoff, which could exceed existing drainage capacity and result in localized flooding (Impact
In compliance with 1994 LRDP EIR Mitigation Measure 4.8-2 (a), incorporated into the proposed project, the existing campus storm drainage system capacity was determined adequate to serve the proposed project (Achimore 2001). In addition, an effort would be made to minimize impervious surfaces in landscape design, and storm water drainage would be channeled, where possible, through swales and over other pervious surfaces to filter runoff and maximize percolation. Therefore, the impact is reduced to a less-than-significant level.

Potential sources of water quality degradation resulting from the proposed project are discussed in Item 9a, above.

The proposed project site is located outside a 100-year flood plain, as defined by the Federal Emergency Management Agency (see 1994 LRDP Draft EIR Figure 4.8-2). Furthermore, the proposed project does not involve construction of housing. Consequently, the project would not expose people or property to water-related hazards associated with the 100-year flood plain. No impact would occur.

The proposed project site is not located near a levee or dam and would not be subject to risk of flooding due to failure of one of these structures. The campus is located approximately 23 miles downstream of Monticello Dam (forming Lake Berryessa) and the Putah Creek Diversion Dam. An inundation study prepared by the U.S. Bureau of Reclamation showed that, in the case of a dam breach, the project site (as well as the campus and 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). Furthermore, as of June 2000, the integrity of Monticello Dam was determined to be in satisfactory condition and the dam exhibited no unusual cracks, seeps, or deformations. Therefore, exposure to inundation as a result of dam failure would be less-than-significant and no mitigation is required.

The proposed project would not be located in an area subject to seiche, tsunami, or mudflow. The project site is flat and is not located in close proximity to any large water bodies. Therefore, no impact would occur.

Standards of significance for hydrology and water quality impacts that were used in preparation of the 1994 LRDP EIR are presented earlier in this section. These standards are consistent with the hydrology and water quality questions in the current Environmental Checklist. As discussed above, with the incorporation of relevant 1994 LRDP EIR mitigation measures, the proposed project would not exceed the standards of significance identified in the 1994 LRDP EIR and would not result in new significant impacts related to hydrology and water quality that were not previously analyzed in the 1994 LRDP EIR.

Summary

1994 LRDP EIR Mitigation Measures 4.8-2 (a), 4.8-3, 4.8-4 (a), 4.8-5 (a), 4.8-6 (a) and (b), 4.8-8 (a) through (c), 4.14-1 (a), and 4.14-3(a) and (b) would be incorporated as part of the project. The proposed project would not result in new or significant hydrology and water quality impacts that have not already been adequately assessed in the 1994 LRDP EIR.
10. **Geology and Soils**

**Background**

The campus is located within 100 miles of a number of fault zones. However, neither the campus nor the City of Davis is located within an Alquist-Priolo Special Study Zone. The East Valley fault, located approximately beneath Russell Ranch, is a subsurface, inferred fault that has not created any surface rupture. No other known faults traverse the campus. According to the Preliminary Map of Maximum Expectable Earthquake Intensity in California, the campus is located in a "moderate" severity zone. The University of California has adopted a Seismic Safety Policy, which requires the identification and correction of potential earthquake hazards in existing structures and requires designs for new building structures that avoid seismic hazards.

Soil conditions on the campus include dense subsurface soils, low groundwater levels and flat topography, suggesting that secondary seismic effects, such as liquefaction, are unlikely. Moderate to high shrink-swell potential is found in all underlying soils, which can cause damage to foundations and other structures. Soils underlying the campus are shown in Figure 4.9-1 on page 4.9-6 of the 1994 LRDP Draft EIR. Soil descriptions and constraints are described on pages 4.9-5 through 4.9-9 of the 1994 LRDP Draft EIR.

**1994 LRDP EIR Standards of Significance**

The environmental analysis in the 1994 LRDP EIR considered a geotechnical impact significant if campus or regional growth would:

- expose people, structures or property to major seismic hazards such as groundshaking or liquefaction; or
- expose people, structures or property to damage from soil hazards such as shrink-swell potential or low soil strength.

**1994 LRDP EIR Significant Impacts and Mitigation Measures**

Impacts of campus growth through 2005-06 related to geotechnical factors and soils are addressed in Section 4.9 (Geotechnical Factors) of the 1994 LRDP Draft EIR. Significant impacts identified in the 1994 LRDP EIR that are relevant to the proposed project are presented in the following table. The levels of significance before and after application of mitigation measures identified in the 1994 LRDP EIR are also presented in the table. The proposed project is within the scope of the geotechnical analysis presented in the 1994 LRDP EIR, and there are no changed circumstances since the preparation of this document that require reanalysis of cumulative impacts. Please note that cumulative regional impact 4.9-3 included mitigation measures to reduce the impact to a less-than-significant level. However, this impact is identified as significant and unavoidable because the University of California can not guarantee implementation of mitigation measures that fall within other jurisdictions to enforce and monitor.
Mitigation measures in the 1994 LRDP EIR that are applicable to the proposed project and that will be required as part of project implementation include the following:

- **LRDP EIR Mitigation Measure 4.9-1(a)** - Prior to final design, the campus shall review and approve all building plans for compliance with the Uniform Building Code and Title 24.

- **LRDP EIR Mitigation Measure 4.9-1(b)** - Prior to occupancy, the campus shall review and approve final building designs for appropriate seismic safety provisions. Appropriate seismic safety provisions shall include anchoring, bracing or restraining nonstructural elements such as furniture, shelving or equipment.

- **LRDP EIR Mitigation Measure 4.9-1(c)** - Each department required to maintain an Injury and Illness Prevention Plan (IIPP) shall incorporate appropriate seismic safety policies. As part of each Department's IIPP, earthquake preparedness drills shall be performed annually by building occupants.

- **LRDP EIR Mitigation Measure 4.9-3(a)** - Implementation of Mitigation Measures 4.9-1 (a) through (e).

- **LRDP EIR Mitigation Measure 4.9-3(b)** - City of Davis General Plan implementing and guiding policies for seismic safety recommend that the City:
  
  (i) continue to monitor studies of seismic activity in the region, and take appropriate action if significant seismic hazards, including earthquake faults, are discovered in the planning area; and

  (ii) continue to update and enforce Building Code requirements for seismic and geologic safety.

- **LRDP EIR Mitigation Measure 4.9-3(c)** - City of Davis General Plan implementing and guiding policies regarding expansive soils recommend that the City:
investigate and mitigate geologic soils hazards, or locate development away from such hazards in order to preserve life and protect property;

require submission of a soils report for development sites where soils conditions are not well known;

require as a condition of approval of development, mitigation of any soils hazards identified; and

require that areas of highly unstable soils, on which construction cannot feasibly be made safe, be used for open space, including greenbelts and parks. Require that site plans for development delineate the hazardous areas, and show the proposed use of those areas as greenbelts or parks.

The mitigation measures listed above are incorporated into the proposed project, and the proposed project, as mitigated, is evaluated in the checklist below.

<table>
<thead>
<tr>
<th>Would the project:</th>
<th>Potentially Significant Impact</th>
<th>Less Than Significant with Mitigation Incorporated</th>
<th>Impact for which LRDP/Program EIR is Sufficient</th>
<th>Less Than Significant Impact</th>
<th>No Impact</th>
</tr>
</thead>
<tbody>
<tr>
<td>a) Expose people or structures to potential substantial adverse effects, including the risk of loss, injury, or death involving:</td>
<td></td>
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</tr>
<tr>
<td>i) Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault?</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>
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</tr>
<tr>
<td>Would the project:</td>
<td>Potentially Significant Impact</td>
<td>Less Than Significant with Mitigation Incorporated</td>
<td>Impact for which LRDP/Program EIR is Sufficient</td>
<td>Less Than Significant Impact</td>
<td>No Impact</td>
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</tr>
<tr>
<td>c) Be located on a geologic unit or soil that is unstable, or that would</td>
<td></td>
<td>□</td>
<td>■</td>
<td>□</td>
<td>□</td>
</tr>
<tr>
<td>become unstable as a result of the project, and potentially result in on- or</td>
<td></td>
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<tr>
<td>off-site landslide, lateral spreading, subsidence, liquefaction or collapse?</td>
<td></td>
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<tr>
<td>d) Be located on expansive soil, as defined in Table 18-1-B of the Uniform</td>
<td>□</td>
<td>□</td>
<td>□</td>
<td>□</td>
<td>□</td>
</tr>
<tr>
<td>Building Code (1994), creating substantial risks to life or property?</td>
<td></td>
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<tr>
<td>e) Have soils incapable of adequately supporting the use of septic tanks or</td>
<td>□</td>
<td>□</td>
<td>□</td>
<td>□</td>
<td>□</td>
</tr>
<tr>
<td>alternative wastewater disposal systems where sewers are not available for the</td>
<td></td>
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<tr>
<td>disposal of wastewater?</td>
<td></td>
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<tr>
<td>f) Exceed an applicable LRDP or Program EIR Standard of Significance?</td>
<td>□</td>
<td>□</td>
<td>□</td>
<td>□</td>
<td>□</td>
</tr>
</tbody>
</table>

**Discussion**

a) (i) The campus is not located within an Alquist-Priolo Earthquake Fault Zone. Table 4.9-2 on page 4.9-3 of the 1994 LRDP Draft EIR lists selected regional faults. As described on page 4.9-2 of the 1994 LRDP Draft EIR, the closest known active fault mapped by the United States Geological Survey is the Dunnigan Hill fault located approximately 12 miles northwest of the main campus. The closest branches of the seismically active San Andreas fault system are the Green Valley (32 miles southwest) and the Rodgers Creek (47 miles southwest) faults. The San Andreas fault is located approximately 67 miles to the southwest. Consequently, the proposed project would not expose people to potential substantial adverse effects involving rupture of a known earthquake fault. No impact would occur.

a) (ii,iii) Seismic groundshaking is discussed on page 4.9-2 of the 1994 LRDP Draft EIR:

According to the Preliminary Map of Maximum Expectable Earthquake Intensity in California, prepared by the California Department of Mines and Geology, the campus is located in a "moderate" severity zone, representing a probable maximum earthquake intensity of VII or VIII on the Modified Mercali Scale which corresponds to an earthquake measuring 6.0 to 6.9 on the Richter Scale... Effects of groundshaking during such an event could include structural damage to stucco, masonry walls, and chimneys exposing people to the associated risks of falling objects and building collapse.
The 1994 LRDP Draft EIR further states on page 4.9-4 that “some soil conditions on the campus include deep subsurface soils, low groundwater levels and flat topography, suggesting that secondary seismic effects, such as liquefaction, are unlikely. Typically [though], the soils deposited in the Central Valley consist of loose alluvial deposits and could be susceptible to liquefaction.” Pursuant to the 1994 LRDP EIR (page 4.9-4 of the LRDP Draft EIR), localized soil assessments would be performed for the proposed project site and would further identify site-specific liquefaction potential.

The proposed project involves the construction of a new 4,455 asf enclosed aquatic support building. The proposed building’s occupants could be exposed to groundshaking and secondary seismic effects from earthquakes. The 1994 LRDP EIR identified that development allowed under the 1994 LRDP could expose people, structures, and property to strong groundshaking and secondary seismic effects (Impact 4.9-1). 1994 LRDP EIR Mitigation Measures 4.9-1 (a) through (c), incorporated into the proposed project, would reduce this impact to a less-than-significant level. These mitigation measures would ensure that the proposed building is designed and constructed in compliance with applicable California Uniform Building Code (CUBC) Zone 4 and Title 24 standards, and that seismic safety provisions and policies are maintained. No further mitigation is required.

The 1994 LRDP EIR concluded that development allowed under the 1994 LRDP, in conjunction with cumulative development in the region, would increase the number of people living and working in the Davis area who would be exposed to strong ground motion and other potential seismic effects from earthquakes in local or regional faults (Impact 4.9-3). Although 1994 LRDP EIR Mitigation Measures 4.9-3 (a) through (c), incorporated into the proposed project, were identified to reduce the magnitude of this impact, the impact would remain significant and unavoidable because the University of California can not guarantee implementation of Mitigation Measures 4.9-3 (b) and (c), which fall within other jurisdictions to enforce and monitor. As discussed in Section IV of this Tiered Initial Study, the proposed project is consistent with the 1994 LRDP population projections for 2005-06. As a result, the proposed project would contribute to, but not exceed the increase in population exposed to ground motion recognized in the 1994 LRDP EIR. The significant and unavoidable impact associated with seismic effects was adequately analyzed in the 1994 LRDP EIR and fully addressed by the Findings and Overriding Considerations adopted by The Regents in connection with its approval of the 1994 LRDP and certification of the 1994 LRDP EIR. There are no changed circumstances since the preparation of these documents that require reanalysis of cumulative impacts.

a)(iv) The proposed project site and surrounding area is characterized by flat topography and therefore would not be subject to landslides. Therefore, no impact would occur.

b) The proposed project site is underlain by Yolo and Reiff Series soils (see Figure 4.9-1 in the 1994 LRDP Draft EIR). These soils, found on alluvial fans, exhibit moderately rapid permeability, very slow runoff, minimal hazard of erosion, and moderate to high shrink-swell potential.

The proposed project would involve grading, trenching, and excavation activities. Such earthmoving activities could result in increased rates of erosion during construction. The
proposed project would also increase impervious surfaces, increasing runoff from the project site and potentially increasing rates of erosion. However, the erosion hazard of soils under the proposed project site is minimal. In addition, the proposed project would be designed to ensure that potential adverse effects related to soil constraints would be minimized to the maximum feasible extent in accordance with applicable CUBC requirements. 1994 LRDP EIR Mitigation Measures 4.8-4 (a), 4.8-5 (a), and 4.8-8 (a) through (c), incorporated into the proposed project as discussed in Item 9 - Hydrology and Water Quality, would further reduce erosion hazards associated with the proposed project. Therefore, impacts of substantial soil erosion or loss of topsoil would be reduced to a less-than-significant level.

c) Lateral spreading, liquefaction potential, or other unstable soil conditions have not been identified as development constraints on campus. The proposed project site is not located on soil or strata that are unstable (see discussion in Item 10b, above). Subsidence due to groundwater withdrawal has been identified at a few locations in Yolo County; however, none of the locations are at or near the campus (Yolo County Community Development Department 1983). Further, the 1994 LRDP EIR did not identify impacts associated with subsidence. Although no significant adverse geologic or soil conditions are anticipated, in compliance with the CUBC, a site-specific geotechnical study would be performed by a registered geologist or engineering geologist prior to building design (as noted on page 4.9-10 in the 1994 LRDP Draft EIR). Recommendations presented in the geotechnical study would be implemented in the design and construction of the proposed project to account for any identified hazards. The proposed project is therefore not anticipated to result in any new or significant impacts that have not already been evaluated in the 1994 LRDP EIR. This impact is considered less-than-significant and no mitigation is required.

d) As described in Item 10b, above, soils under the proposed project site are characterized as having moderate to high shrink-swell (expansion) potential, which could result in structural damage. The 1994 LRDP EIR concluded that impacts related to development on expansive soils would be less-than-significant, because all development would be required to comply with the CUBC for building design and construction. The proposed project would also incorporate Mitigation Measure 4.9-1(a), requiring review of facility design to ensure compliance with the CUBC. Therefore, potential adverse effects associated with expansive soils or other geotechnical constraints of the proposed project site would be reduced to a less-than-significant level.

e) The proposed project does not involve the installation or use of septic tanks or alternative wastewater disposal systems. Wastewater from the proposed project would be treated at the campus Wastewater Treatment Plant. No impact would occur.

f) Standards of significance for geology and soils impacts that were used in preparation of the 1994 LRDP EIR are presented earlier in this section. These standards are consistent with the geology and soils questions in the current Environmental Checklist. Based on the discussion presented above, with the incorporation of 1994 LRDP EIR mitigation measures, the proposed project would not exceed the standards of significance identified in the 1994 LRDP EIR and would not result in new significant impacts related to geology and soils that were not previously analyzed in the 1994 LRDP EIR.
Summary

1994 LRDP EIR Mitigation Measures 4.9-1 (a) through (c) and 4.9-3 (a) through (c) would be incorporated as part of the project. The proposed project would not result in new or significant geology and soils impacts that have not already been adequately assessed in the 1994 LRDP EIR.
11. Mineral Resources

Background

Natural gas has been found on the main campus and at the Russell Ranch. Natural gas extraction techniques allow wells to be placed at considerable distances from the deposits. No other known or potential mineral resources have been identified on the UC Davis campus. As such, the 1994 LRDP EIR did not identify any impacts to mineral resources.

1994 LRDP EIR

Mineral resources are briefly addressed in Section 4.9 (Geotechnical Factors) of the 1994 LRDP Draft EIR. Mineral resources are briefly discussed in Section 4.9 of the 1994 LRDP EIR. The 1994 LRDP EIR did not identify impacts of campus development through 2005-06 on mineral resources.

### MINERAL RESOURCES

<table>
<thead>
<tr>
<th>Would the project:</th>
<th>Potentially Significant Impact</th>
<th>Less Than Significant with Mitigation Incorporated</th>
<th>Impact for which LRDP/Program EIR is Sufficient</th>
<th>Less Than Significant Impact</th>
<th>No Impact</th>
</tr>
</thead>
<tbody>
<tr>
<td>a) Result in the loss of availability of a known mineral resource that would be of value to the region and the residents of the state?</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>■</td>
</tr>
<tr>
<td>b) Result in the loss of availability of a locally-important mineral resource recovery site delineated on a local general plan, specific plan or other land use plan?</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>■</td>
</tr>
<tr>
<td>c) Exceed an applicable LRDP or Program EIR Standard of Significance?</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>■</td>
</tr>
</tbody>
</table>

Discussion

a) As described on page 4.9-9 of the 1994 LRDP Draft EIR, there are no known mineral resources identified on the main campus. Natural gas has been identified under a portion of the campus, but development of the proposed project would not affect the availability of any mineral resource. Therefore, no impact would occur.

b) The proposed project would not result in the loss of availability of a locally important mineral resource recovery site delineation on a local general plan, specific plan, or other land use plan. No impact would occur.

c) The 1994 LRDP EIR did not identify any standards of significance with respect to mineral resources. No impact would occur.
Summary

The proposed project would not result in any new or significant mineral resource impacts. No mineral resource impacts were identified in the 1994 LRDP EIR.
12. **Cultural Resources**

**Background**

The 1994 LRDP EIR describes known cultural (prehistoric and historic) resources on the campus. Prehistoric resources are those sites and artifacts associated with the indigenous, non-Euroamerican population, generally dating prior to contact with people of European descent. Historical resources include structures, features, artifacts and sites that date from Euroamerican settlement of the region.

Prehistoric Resources: At the time of first European contact, the campus was within the territory of the Patwin. The Patwin controlled a 90-mile section of land running from Suisun Bay to Princeton on the Sacramento River, and from Long Valley-San Pablo Bay on the west to the Sacramento River on the east. Record searches were conducted for the central campus, west campus, south campus, Russell Ranch and the South Davis Research Park. Surface and subsurface cultural resource surveys have been performed for extensive areas of the campus as part of the site work for campus construction projects. Prehistoric Native American sites, including burials, have been identified at several locations on the central campus.

Historic Resources: 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, and several are considered significant historical resources. There are more than 50 structures on campus that are over 45 years old. Most of these have not been evaluated for historical significance. Future analysis will be required under CEQA and the National Historic Preservation Act for any buildings over 45 years old that could be damaged or destroyed.

**1994 LRDP EIR Standards of Significance**

An impact was considered significant in the 1994 LRDP EIR if campus or regional growth would:

- result in the damage or destruction of prehistoric sites or artifacts that would meet CEQA and/or federal criteria for significance; or

- result in the damage or destruction of historical structures, features, artifacts, landscaping or sites that would meet CEQA, federal, or campus criteria for significance.

**1994 LRDP EIR Significant Impacts and Mitigation Measures**
Impacts of campus growth through year 2005-06 on cultural resources are addressed in Section 4.10 (Cultural Resources) of the 1994 LRDP Draft EIR. Significant impacts identified in the 1994 LRDP EIR that are relevant to the proposed project are presented in the following table. The levels of significance before and after the application of mitigation measures identified in the 1994 LRDP EIR are also presented. The proposed project is within the scope of the cultural resources analysis presented in the 1994 LRDP EIR, and there are no changed circumstances since the preparation of this document that require reanalysis of cumulative impacts. Please note that cumulative regional impact 4.10-4 included mitigation measures to reduce the impact to a less-than-significant level. However, this impact was identified as significant and unavoidable because the University of California cannot guarantee implementation of mitigation measures that fall within other jurisdictions to enforce and monitor.

<table>
<thead>
<tr>
<th>LRDP EIR IMPACT</th>
<th>Level of Significance Prior to Mitigation</th>
<th>Level of Significance after/with Mitigation</th>
</tr>
</thead>
<tbody>
<tr>
<td>4.10-1 Excavation, grading and construction activities could damage or destroy</td>
<td>SU</td>
<td>SU</td>
</tr>
<tr>
<td>buried cultural (prehistoric or historic) resources.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>4.10-4 Development allowed under the 1994 LRDP could contribute to a cumulative</td>
<td>SU</td>
<td>SU</td>
</tr>
<tr>
<td>loss of prehistoric and historic resources in Yolo and Solano Counties.</td>
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</table>

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

Mitigation measures identified in the 1994 LRDP EIR that are applicable to the proposed project and that will be required as part of project implementation include the following:

- **LRDP EIR Mitigation Measure 4.10-1(a)** - Prior to project approval, the campus shall determine the level of archaeological investigation that is appropriate for the project site. The levels are:

  Minimum: excavation below 18" deep and in a relatively small area (e.g. routine maintenance and operations such as repairing broken facilities, a short trench for lawn irrigation, tree planting, etc.); in other areas, excavation less than 36" deep and in a relatively small area.

  Moderate: excavation below 36" and/or over a large area on any site that has not been characterized and is not suspected to be a likely location for archaeological resources.

  Intensive: excavation below 18" and/or over a large area on any site that is within 800' of the historic alignment of Putah Creek (prior to 1880) or that is adjacent to a recorded archaeological site.

- **LRDP EIR Mitigation Measure 4.10-1(c)** - For sites requiring moderate level of investigation, the following steps shall be taken.

  (i) A surface survey shall be conducted by a qualified archaeologist prior to project
approval.

(ii) If evidence of archeological resources are found, a qualified archaeologist shall prepare and implement a plan for subsurface investigation of the site. The archaeologist shall determine and advise the campus on the potential for the project to affect a significant archaeological resource. If the project might affect a significant archaeological resource, the campus shall adopt an appropriate mitigation plan at the time of project approval. If feasible, the campus shall consider avoidance at significant archaeological sites as the preferred mitigation. At a minimum, data recovery at significant archaeological sites will be implemented.

(iii) If evidence of archaeological resources is not found during the surface survey, a qualified archaeologist shall be present during excavation and grading, as deemed necessary by the archaeologist.

(iv) Steps (i) through (iv) of item (b) shall be implemented.

(b)(i) Prior to disturbing the soil, contractors shall be notified that they are required to watch for potential archaeological sites and artifacts and to notify the campus if anything is found. In addition, campus employees whose work involves routinely disturbing the soil shall be trained to recognize evidence of potential archaeological sites and artifacts.

(b)(ii) If resources are discovered during activities, all soil disturbing work within 100' of the find shall cease. The resources shall be evaluated by a qualified archaeologist who will determine and advise the campus on the potential for the activity to affect a significant archaeological resource.

(b)(iii) If the activity might affect a significant archaeological resource, consistent with CEQA and Appendix K of the CEQA Guidelines addressing archaeological impacts a plan for surveying the remainder of the site and conducting appropriate data recovery and other mitigations shall be prepared and implemented using the services of a qualified archaeologist.

(b)(iv) If human remains are found, the County coroner shall be contacted. The coroner shall contact the Native American Heritage Commission, which shall notify the appropriate descendant. The campus shall coordinate re-interment of Native American remains with the NAHC and the designated descendant.

• **LRDP EIR Mitigation Measure 4.10-4(a)** - Implement Mitigation Measures 4.10-1(a) through 4.10-1(d), 4.10-2(a) through (c) and 4.10-3(a) through (c).

• **LRDP EIR Mitigation Measure 4.10-4(b)** - The Yolo and Solano County General Plans and the City of Davis General Plan contain policies which address the preservation of cultural resources. It is within the jurisdiction of these agencies to implement the General Plan policies which encourage the protection and restoration of cultural resources.
The mitigation measures listed above are incorporated into the proposed project, and the proposed project, as mitigated, is evaluated in the checklist below.

<table>
<thead>
<tr>
<th>CULTURAL RESOURCES</th>
<th>Potentially Significant Impact</th>
<th>Less Than Significant with Mitigation Incorporated</th>
<th>Impact for which LRDP/Program EIR is Sufficient</th>
<th>Less Than Significant Impact</th>
<th>No Impact</th>
</tr>
</thead>
<tbody>
<tr>
<td>a) Cause a substantial adverse change in the significance of a historical resource as defined in §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 §15064.5?</td>
<td>□</td>
<td>□</td>
<td>■</td>
<td>□</td>
<td>□</td>
</tr>
<tr>
<td>c) Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?</td>
<td>□</td>
<td>□</td>
<td>□</td>
<td>□</td>
<td>■</td>
</tr>
<tr>
<td>d) Disturb any human remains, including those interred outside of formal cemeteries?</td>
<td>□</td>
<td>□</td>
<td>■</td>
<td>□</td>
<td>□</td>
</tr>
<tr>
<td>e) Cause a substantial adverse change in the significance of a historic landscape feature?</td>
<td>□</td>
<td>□</td>
<td>□</td>
<td>□</td>
<td>■</td>
</tr>
<tr>
<td>f) Exceed an applicable LRDP Program EIR Standard of Significance?</td>
<td>□</td>
<td>□</td>
<td>■</td>
<td>□</td>
<td>□</td>
</tr>
</tbody>
</table>

Discussion

a) There are no historical buildings or resources located on the project site. Therefore, no impact would occur.

b) As discussed on page 4.10-9 of the 1994 LRDP Draft EIR, any time earth is disturbed, buried resources can be damaged or destroyed. This risk on campus is highest along the historic banks of the tributaries and slough channels of Putah Creek. The proposed project is approximately 1/4 mile north of the zone of cultural sensitivity bordering the historic channel of Putah Creek (now the campus Arboretum waterway). The proposed project is also approximately 1/4 mile south of site CA-YOL-134, located at the University Extension Center. Site CA-YOL-134 was originally reported to contain human burials and other associated artifacts. Previous archaeological investigations have not precisely defined the boundaries of CA-YOL-134, and there is a chance that cultural deposits exist within the proposed project site.

Consistent with 1994 LRDP EIR Mitigation Measure 4.10-1(a), incorporated into the proposed project, archeological surveys and auger testing were conducted on the proposed project site.
in 1999. A surface survey was conducted for the proposed project site and adjacent areas. Subsurface testing was accomplished using auger probes at five locations immediately north of the proposed project site. Augur probes were not performed within the proposed project site due to its proximity to the field inhabited by burrowing owls. No significant cultural material was identified by either the surface survey or the auger probes (Pacific Legacy 1999). However, due to the proposed project’s proximity to the historic channel of Putah Creek and site CA-YOL-134, an archaeological monitoring plan will be developed for the proposed project that addresses the level, timing, and implementation of cultural monitoring activity during construction of the proposed project. 1994 LRDP EIR Mitigation Measure 4.10-1(c), incorporated into the proposed project, would reduce the project-level impact on cultural resources to a less-than-significant level.
The 1994 LRDP EIR concluded that implementation of the 1994 LRDP could contribute to a cumulative loss of cultural resources on the campus (Impact 4.10-1) and in Yolo and Solano counties (Impact 4.10-4). Although 1994 LRDP EIR Mitigation Measures 4.10-1 (a) and (c) and 4.10-4 (a) and (b), incorporated into the proposed project, would reduce the magnitude of these cumulative impacts, the cumulative impacts would remain significant and unavoidable because even if cultural resources are adequately recorded, destruction and/or removal from their place of origin reduces their value as a resource. In addition, implementation of Mitigation Measure 4.10-4(b) is not within the jurisdiction of the University to enforce and monitor. Significant and unavoidable 1994 LRDP EIR Impacts 4.10-1 and 4.10-4 were adequately analyzed in the 1994 LRDP EIR and fully addressed by the Findings and Overriding Considerations adopted by The Regents in connection with its approval of the 1994 LRDP and certification of the 1994 LRDP EIR. There are no changed circumstances since the preparation of these documents that require reanalysis of these cumulative impacts.

c) As described on page 4.9-1 of the 1994 LRDP Draft EIR, subsurface soils on campus are comprised of alluvial sediment (to a depth of up to 3,000 feet below the surface) deposited by Putah Creek over the last five million years. Fossilized remains have been found in soils of this type. Although not restricted to specific soil depths, such fossils would likely be encountered in large, deep excavations or contouring-type activities, such as those associated with mining, quarrying, or road building, in which substantial amounts of rock or unconsolidated materials are exposed. The likelihood of damaging or destroying paleontological resources at the proposed project site is minimal because construction of the proposed project would not involve deep excavations (i.e., deeper than 20 feet below ground surface). Implementation of the proposed project would not result in any impacts to unique geological features, as none have been identified on the proposed project site. Therefore, no impacts on paleontological resources or unique geologic features are anticipated to occur.

d) In compliance with 1994 LRDP EIR Mitigation Measure 4.10-1(b), incorporated into the proposed project, should human remains be encountered during proposed construction, work in the vicinity would halt and the County Coroner would be notified as stipulated by Public Resources Code 5097. Native American consultation would be carried out should the remains be determined to be Native American. Implementation of 1994 LRDP EIR Mitigation Measure 4.10-1(b) would reduce the project's potential impact to human remains to a less-than-significant level.

e) The proposed project would not involve demolition of landscape features meeting the requirements of historic significance because no such features are known to occur on the proposed project site. The site is annual/grassland habitat and vegetation consists primarily of non-native weedy grasses. No impact would occur.

f) Standards of significance for cultural resources impacts that were used in preparation of the 1994 LRDP EIR are presented earlier in this section. These standards are consistent with the cultural resources questions in the current Environmental Checklist. As discussed above, with the implementation of 1994 LRDP EIR mitigation measures, the proposed project would not exceed the standards of significance identified in the 1994 LRDP EIR and would not result in new significant impacts related to cultural resources that were not previously analyzed in the
Summary

1994 LRDP EIR Mitigation Measures 4.10-1 (a) and (c) and 4.10-4 (a) and (b) are incorporated into the proposed project. The proposed project would not result in new or significant cultural resource impacts that have not already been adequately assessed in the 1994 LRDP EIR.
13. Aesthetics

Background

The campus is bordered on the south and west by orchards, tilled fields, and pastures interspersed with rural homes and agricultural structures. The City of Davis is adjacent to the eastern and northern boundaries of the campus. The City is primarily composed of one and two story homes and businesses. The downtown area retains the atmosphere of a small college town. Each of the major components of the campus has a distinct visual character. The proposed project would be located on the central campus on an undeveloped site between the core campus and the Health Sciences District. Views of the proposed Aquatics Center and parking lot would be from all directions and would include people travelling on La Rue Road to the east, bicyclists and pedestrians travelling on the realigned bicycle path to the north, and users of the Health Sciences District to the southwest.

The central campus is the most developed campus unit with a large number of academic and support buildings. Sproul Hall in the central campus, at 11 stories high, is the tallest building in Yolo County, and few buildings in the region are more than four-stories high. The low buildings and landscaping, combined with the urban location, keep night lighting from appearing particularly intrusive to individuals in nearby buildings and residences. The central campus is extensively landscaped, with mature vegetation and trees masking the mass of some academic buildings and obscuring long-range views. The Quad, a large lawn between the Memorial Union and Shields Library, is a focal point of the central campus.

The 1994 LRDP identifies features of the visual environment that are valued by the campus community and should be preserved. For the central campus, these features include: (1) the large, open lawn of the Quad at the heart of the campus, (2) the framework of tree-lined streets, particularly around the Quad where the street tree branches arch to create a canopy overhead, (3) the Arboretum, with its large trees and variety of landscapes along the waterway, (4) the shingle-sided buildings from the founding years of the University Farm, (5) buildings from the second era of campus development such as Hart Hall and Walker Hall, (6) the open, green lawns that face the community along Russell Boulevard and A Street, and (7) bicycles.

1994 LRDP EIR Standards of Significance

The environmental analysis in the 1994 LRDP EIR considered an impact to aesthetics significant if campus or regional growth would:

- allow incompatible development in or near areas with high visual quality, such as Putah Creek and the Arboretum Waterway, or substantially affect the valued elements of the visual landscape identified in the LRDP.

- result in structures that would disrupt views of surrounding agricultural lands, the Coast Range, or the Sierra Nevada; or

- create substantial new sources of artificial light and/or glare.
1994 LRDP EIR Significant Impacts and Mitigation Measures

Impacts of campus growth through 2005-06 on aesthetics are discussed in Section 4.11 (Visual Quality/Aesthetics) of the 1994 LRDP Draft EIR. Significant impacts identified in the 1994 LRDP EIR that are relevant to the proposed project are presented in the following table. The levels of significance before and after application of mitigation measures identified in the 1994 LRDP EIR are also presented. The proposed project is within the scope of the analysis in the 1994 LRDP EIR and there are no changed circumstances since the preparation of this document that require reanalysis of the cumulative impacts. Please note that cumulative regional impact 4.11-5 included mitigation measures to reduce the impact to a less-than-significant level. However, this impact was identified as significant and unavoidable because the University of California cannot guarantee implementation of the mitigation measures that fall within other jurisdictions to enforce and monitor.

<table>
<thead>
<tr>
<th>LRDP EIR IMPACT</th>
<th>Level of Significance Prior to Mitigation</th>
<th>Level of Significance after/with Mitigation</th>
</tr>
</thead>
<tbody>
<tr>
<td>4.11-1 Structures built on the Central Campus under the 1994 LRDP could affect valued elements of the Central Campus visual landscape identified in the LRDP.</td>
<td>PS</td>
<td>LS</td>
</tr>
<tr>
<td>4.11-4 Structures built under the LRDP could create glare, artificial light, heat and shade, making the immediate area uncomfortable for people.</td>
<td>PS</td>
<td>LS</td>
</tr>
<tr>
<td>4.11-5 Development allowed under the 1994 LRDP, in conjunction with other development in the region, would contribute to a cumulative alteration of the rural character of Yolo and Solano Counties.</td>
<td>SU</td>
<td>SU</td>
</tr>
</tbody>
</table>

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

Mitigation measures in the LRDP EIR that are applicable to the proposed project and that will be required as part of project implementation include the following:

- **LRDP EIR Mitigation Measure 4.11-1(a)** - New structures in the Central Campus shall be designed to be compatible with those visual elements and policies identified in the LRDP.

- **LRDP EIR Mitigation Measure 4.11-1(b)** - Prior to approval of preliminary drawings, a campus Design Review Board shall determine that the designs are consistent with the LRDP and applicable district planning guidelines for the district within which the new structure will be located.

- **LRDP EIR Mitigation Measure 4.11-1(c)** - Prior to siting any new structure on the Central Campus, the campus shall identify major view corridors, taking into consideration the relationship of the view to each affected neighboring district.

- **LRDP EIR Mitigation Measure 4.11-1(d)** - The campus Design Review Board shall review building designs to ensure that structures are not within major view corridors, except for structures that are designed to protect critical views.
• **LRDP EIR Mitigation Measure 4.11-4(a)** - Prior to design approval of the first structure approved following adoption of the 1994 LRDP, the campus shall develop guidelines to minimize discomfort from light, heat, and glare.

The guidelines could include, but would not be limited to, building surfaces, landscaping, orientation and exposure, and lighting.

• **LRDP EIR Mitigation Measure 4.11-4(b)** - Prior to design approval of any building, the campus Design Review Board shall assess the building design for compliance with the guidelines developed under Mitigation Measure 4.11-4(a).

• **LRDP EIR Mitigation Measure 4.11-5(a)** - Implement Mitigation Measure 4.11-2 and 4.11-4(a) and (b).

• **LRDP EIR Mitigation Measure 4.11-5(b)** - The City of Davis General Plan, Yolo County General Plan, and Solano County General Plan contain policies that address the preservation and protection of agricultural land. It is within the jurisdiction of these agencies to implement the General Plan policies which support the conservation of agricultural land and the prohibition of new development in designated agricultural areas.

The mitigation measures listed above are incorporated into the proposed project, and the proposed project, as mitigated, is evaluated in the checklist below.

<table>
<thead>
<tr>
<th>AESTHETICS</th>
<th>Potentially Significant Impact</th>
<th>Less Than Significant with Mitigation Incorporated</th>
<th>Impact for which LRDP/Program EIR is Sufficient</th>
<th>Less Than Significant Impact</th>
<th>No Impact</th>
</tr>
</thead>
<tbody>
<tr>
<td>Would the project:</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>a) 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, trees, rocks outcroppings, historic buildings within a State scenic 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 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 adversely affect day or nighttime views in the area?</td>
<td>☐</td>
<td>☐</td>
<td>☒</td>
<td>☑</td>
<td>☑</td>
</tr>
<tr>
<td>e) Affect valued elements of the Central Campus visual landscape</td>
<td>☐</td>
<td>☐</td>
<td>☒</td>
<td>☑</td>
<td>☑</td>
</tr>
</tbody>
</table>
AESTHETICS

<table>
<thead>
<tr>
<th>Would the project:</th>
<th>Potentially Significant Impact</th>
<th>Less Than Significant with Mitigation Incorporated</th>
<th>Impact for which LRDP/Program EIR is Sufficient</th>
<th>Less Than Significant Impact</th>
<th>No Impact</th>
</tr>
</thead>
<tbody>
<tr>
<td>f) Exceed an applicable LRDP or Program EIR Standard of Significance?</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
</tr>
</tbody>
</table>

Discussion

a) The UC Davis campus occupies fairly flat terrain and is substantially surrounded by one to four-story development and agricultural uses. Consequently, views from numerous areas on and around the campus are relatively expansive, and on clear days the Sierra and the Coast Ranges can be seen. The proposed project would not obstruct views of the Sierra. Views from the project site to the west include partial views of the Coast Ranges, but these views are limited by mature trees and existing buildings. The impact would be less-than-significant and no mitigation is required.

b) SR 113 and I-80 in the vicinity of UC Davis are not designated scenic highways. The project would not impact scenic resources within a state scenic highway. No impact would occur.

c,e) The visual character of the site would change from the existing undeveloped, open field to a developed portion of campus containing buildings, formal landscaping, and night-time illumination. The proposed building and spectator seating would be of single story height. The pool and pool deck would be constructed approximately 3.5 feet below the existing ground level. The perimeter of the site would include substantial landscaping, and the pool and deck area would be bordered by the support building to the west and fencing to the north, east, and south. Lighting for the pool area would include light poles of up to 50 feet in height. The landscaping and berming would result in a development that is compatible with the character and existing development of the campus. The parking area would include landscaping to achieve 50 percent shade coverage after 15 years and parking lot lighting would be designed to a height of 15 feet.

The 1994 LRDP EIR determined that depending on the location, height, massing, design and landscaping, new structures could substantially alter the existing visual character and the collegiate atmosphere of the campus (Impact 4.11-1). Consistent with the 1994 LRDP EIR Mitigation Measure 4.11-1(a), the proposed project would be designed to extend the visual character of the campus. In addition, consistent with 1994 LRDP EIR Mitigation Measures 4.11-1(b) through (d), incorporated as part of the proposed project, the design of the project would be reviewed by the campus Design Review and Advisory Work Group (formerly the campus Design Review Board). This group is composed of the Campus Architect, Campus Planner, and program representatives. As a result, with the implementation of mitigation measures outlined in the 1994 LRDP EIR, the impacts of the proposed project on the visual character of the site and its surroundings would be less-than-significant.
The 1994 LRDP EIR determined that development under the 1994 LRDP, in conjunction with other development in the region, would contribute to a cumulative alteration of the rural character of Yolo and Solano counties (Impact 4.11-5). Although 1994 LRDP EIR Mitigation Measures 4.11-5 (a) and (b) would be implemented as part of the proposed project, this impact was considered significant and unavoidable because implementation of 1994 LRDP EIR Mitigation Measure 4.11-5(b) is not within the University's jurisdiction to enforce and monitor. This cumulative impact was adequately analyzed in the 1994 LRDP EIR and fully addressed by the Findings and Overriding Considerations adopted by The Regents in connection with its approval of the 1994 LRDP and certification of the 1994 LRDP EIR. There are no changed circumstances since the preparation of these documents that require reanalysis of cumulative impacts.
d) Glare is caused by light reflections from pavement, vehicles, and building materials such as reflective glass and polished surfaces. During daylight hours, the amount of glare depends on the intensity and direction of sunlight. At night, artificial light can cause glare. The proposed project would introduce increased lighting and light levels to the proposed site. The 1994 LRDP EIR identified that structures built under the 1994 LRDP could create glare, artificial light, heat, and shade, making the immediate area uncomfortable for people (Impact 4.11-4). In compliance with 1994 LRDP EIR Mitigation Measure 4.11-4(a), the campus has developed guidelines to minimize discomfort from light, heat and glare. All lighting would be installed in accordance with campus Facilities Design Standards including cut-off lighting in buildings to reduce glare. In addition, the lighting standards of UC Davis’ Architects and Engineers would also be implemented. With implementation of mitigation measure 4.11-4(a), the potential impacts associated with light and glare would be reduced to a less-than-significant level.

f) Standards of significance for aesthetics impacts that were used in preparation of the 1994 LRDP EIR are presented earlier in this section. These standards are consistent with the aesthetics questions in the current Environmental Checklist. As discussed above, with the incorporation of relevant 1994 LRDP EIR mitigation measures, the proposed project would not exceed the standards of significance identified in the 1994 LRDP EIR and would not result in new significant impacts related to aesthetics that were not previously analyzed in the 1994 LRDP EIR.

Summary

1994 LRDP EIR Mitigation Measures 4.11-1 (a) through (d), 4.11-4 (a) and (b), and 4.11-5 (a) and (b) are incorporated into the proposed project. The proposed project would not result in new or significant aesthetics impacts that have not already been adequately assessed in the 1994 LRDP EIR.
14. **PUBLIC SERVICES**

**Background**

Fire Protection

The UC Davis Fire Department provides fire protection, hazardous materials incident response, and emergency medical service to the campus. Recent figures show the campus Fire Department employs 18 line firefighters, in addition to fire prevention, supervisor, and support personnel. In addition, nine student firefighters are also employed (Ebner 2001). Fire protection service demand is based on a ratio of personnel to increased square footage (3.5 fire fighters per 1,000,000 gsf). The campus Fire Department entered into two automatic aid agreements in 1994 with the City of Davis to maintain this ratio and to ensure adequate response times.

Police Protection

The campus Police Department provides police protection service for all buildings and facilities either owned or leased by UC Davis. Recent figures show the campus Police Department employs 31.5 sworn officers, in addition to other non-sworn personnel, including dispatchers and support staff (Chang 2001). Police protection service demand is based on a ratio of personnel to increased population (0.72 officers per 1,000 population). In 1999-00, the campus population of students, faculty, and staff was 32,775 (Table 1). Thus, the ratio of officers was approximately 0.96 per 1,000 students, faculty, and staff, which exceeded the campus standard.

Schools

The Davis Joint Unified School District (DJUSD) serves the City of Davis and portions of Yolo and Solano counties. With the exception of one elementary school, all DJUSD facilities are within City of Davis boundaries.

Other Public Facilities

The campus currently has four libraries located in the central campus serving both the campus population and the general public: Shields Library, Physical Sciences Library, Law Library, and Health Sciences Library. The Davis Library, a branch of the Yolo County Library, is located in the City of Davis.

The City of Davis maintains adequate park and recreation uses to accommodate buildout of the City. In addition, the campus provides parks and open space available to the general public.

1994 LRDP EIR Standards of Significance

The environmental analysis provided in the 1994 LRDP EIR considered an impact to fire protection, police protection, schools, parks and other public facilities significant if campus or regional growth would:
• substantially diminish the current level of fire protection service (i.e., response time, level of investigative services);

• substantially diminish the current level of police protection service (i.e., response time, level of investigative services);

• require expansion or realignment of the existing school system; or

• require an expansion of library facilities or the library system.

1994 LRDP EIR Significant Impacts and Mitigation Measures

Impacts of campus growth through year 2005-06 on fire protection, police protection, schools, and other public facilities are addressed in Sections 4.12 (Fire and Police Protection) and 4.13 (Community Services) of the 1994 LRDP Draft EIR. Significant impacts identified in the 1994 LRDP EIR that are relevant to the proposed project are presented in the following table. The levels of significance before and after application of 1994 LRDP EIR Mitigation Measures are also presented. The proposed project is within the scope of the public services analysis presented in the 1994 LRDP EIR, and there are no changed circumstances since the preparation of this document that require reanalysis of the cumulative impacts. Please note that Cumulative Impacts 4.12-4, 4.12-5, and 4.13-5 include mitigation measures to reduce the impacts to a less-than-significant level. However, these impacts are identified as significant and unavoidable because the University of California cannot guarantee implementation of mitigation measures that fall within other jurisdictions to enforce and monitor.

<table>
<thead>
<tr>
<th>LRDP EIR IMPACT</th>
<th>Level of Significance Prior to Mitigation</th>
<th>Level of Significance After/With Mitigation</th>
</tr>
</thead>
<tbody>
<tr>
<td>4.12-1 Development allowed under the 1994 LRDP could result in a reduction of the level of fire protection service provided by the UC Davis Fire Department.</td>
<td>S</td>
<td>LS</td>
</tr>
<tr>
<td>4.12-2 Development allowed under the 1994 LRDP would result in new buildings and facilities in areas where water pressure may be low.</td>
<td>S</td>
<td>LS</td>
</tr>
<tr>
<td>4.12-3 Development allowed under the 1994 LRDP could result in a reduction of the level of police protection service provided by the UC Davis Police Department.</td>
<td>S</td>
<td>LS</td>
</tr>
<tr>
<td>4.12-4 Cumulative development allowed under the 1994 LRDP could result in decreased level of service from City of Davis fire protection services.</td>
<td>SU</td>
<td>SU</td>
</tr>
<tr>
<td>4.12-5 Cumulative development allowed under the 1994 LRDP could result in decreased level of service from the City of Davis police protection services.</td>
<td>SU</td>
<td>SU</td>
</tr>
<tr>
<td>4.13-5 Cumulative development of the Davis area would generate an increase in the number of school age students in the DJUSD.</td>
<td>SU</td>
<td>SU</td>
</tr>
</tbody>
</table>

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

Mitigation measures in the 1994 LRDP EIR that are applicable to the proposed project and that
will be required as part of project implementation include the following:

- **LRDP EIR Mitigation Measure 4.12-1** - The campus shall implement one or more of the following measures in order to maintain current level of fire protection services:
  
  (a) hire additional firefighters and support staff as necessary to maintain the existing ratio of 3.5 firefighters per 1,000,000 square feet of building area on the UC Davis campus;
  
  (b) add additional equipment or improve techniques to meet needs of fire protection needs; or
  
  (c) expand mutual aid assistance from adjacent jurisdictions.

- **LRDP EIR Mitigation Measure 4.12-2** - Prior to the construction of new buildings or facilities, the campus shall determine the water pressure of the domestic/fire water system serving the site. If the pressure is determined to be below the industry standard set for fire water flows, then the campus shall upgrade the domestic/fire water system to provide the appropriate water pressure and flow to the proposed building or facility site.

- **LRDP EIR Mitigation Measure 4.12-3** - The campus shall implement one or more of the following measures in order to maintain current level of police protection services:
  
  (a) hire additional sworn-officers and support staff as necessary to maintain the existing ratio of 0.72 sworn-officers per 1,000 daily population;
  
  (b) add additional equipment or improve techniques to meet needs of police protection; or
  
  (c) expand mutual aid assistance from adjacent jurisdictions.

- **LRDP EIR Mitigation Measure 4.12-4(a)** - Implement Mitigation Measures 4.12-1 and 4.12-2

- **LRDP EIR Mitigation Measure 4.12-4(b)** - The General Plan describes how City of Davis ordinances and assessment districts can ensure that the needed additional fire services and facilities are provided in coordination with development. Furthermore, City of Davis policy does not allow construction in new development areas until all necessary public services (including water, fire hydrants, and roads meeting the Fire Department's specifications) are in place. It is in the jurisdiction of the City of Davis to construct and staff fire stations, or increase efficiency as necessary to provide all portions of the fire department's service area with five-minute response capability as is indicated in the Davis General Plan.

- **LRDP EIR Mitigation Measure 4.12-5(a)** - Implement Mitigation Measure 4.12-3.

- **LRDP EIR Mitigation Measure 4.12-5(b)** - The Fiscal Analysis section of the Technical Supplement to the City of Davis General Plan indicates how needed capital improvements and
additional police personnel may be funded. Funds to expand police services may be obtained through construction taxes and assessment fees imposed upon new residential and commercial development in the City. In this way the financial burden for increased service would be placed on new residents, including incoming campus employees buying new homes in Davis, and students living off-campus in newly constructed rental units. It is within the jurisdiction of the City of Davis to hire additional police officers and support staff, or increase efficiency, as needed to maintain the existing level of service to the community as identified in the Davis General Plan.

- **LRDP EIR Mitigation Measure 4.13-5** - The Fiscal Analysis section of the Technical Supplement to the City of Davis General Plan describes the City's existing plans to construct schools needed in the future and illustrates how additional facilities could be funded. It is within the jurisdiction of the City of Davis and DJUSD to plan and construct new school facilities in the Davis Planning Area, as indicated in the Davis General Plan. As new areas of housing are developed in the Davis Planning Area, the City of Davis would address resulting impacts to DJUSD schools.

Mitigation measures listed above are incorporated into the proposed project, and the proposed project, as mitigated, is evaluated in the checklist below.

<table>
<thead>
<tr>
<th>PUBLIC SERVICES</th>
<th>Potentially Significant Impact</th>
<th>Less Than Significant with Mitigation Incorporated</th>
<th>Impact for which LRDP/Program EIR is Sufficient</th>
<th>Less Than Significant Impact</th>
<th>No Impact</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Would the project:</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>a) 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) The campus Fire Department provides service to the project area. Design and construction of the proposed project would conform to all applicable building codes and fire/life safety codes. In addition, the proposed project would include fire safety features such as a fire sprinkler system.

The proposed project would contribute approximately 5,240 gsf additional enclosed building space to the campus. The 1994 LRDP identified that assumed development could result in a reduction of fire protection services provided by the UC Davis Fire Department (Impact 4.12-1). The 1994 LRDP EIR identified an adequate level of fire protection services for the campus was 3.5 firefighters per 1,000,000 gsf of campus building space. To meet this, the proposed project (with 5,240 gsf) would require approximately 0.02 additional firefighter. In compliance with 1994 LRDP EIR Mitigation Measure 4.12-1 and in order to maintain an adequate level of fire protection services, the campus Fire Department entered into automatic aid agreements with the City of Davis in 1994. Continued compliance with 1994 LRDP EIR Mitigation Measure 4.12-1, incorporated as part of the proposed project, would reduce the project's impact to fire protection services to a less-than-significant level.

Development allowed under the 1994 LRDP is projected to increase the daily maximum peak domestic/fire water demand to a total demand of approximately 12,593 gpm at buildout. Current capacity of the existing domestic/fire water system is 10,892 gpm (West Yost 2000a). The 1994 LRDP EIR identified that development allowed under the 1994 LRDP could result in the construction of new facilities in areas where water pressure may be low (Impact 4.12-2). Peak demand for fire flows is substantially higher than peak domestic water demand. Therefore, campus domestic/fire water system distribution lines are sized to meet peak fire flows. 1994 LRDP EIR Mitigation Measure 4.12-2, incorporated as a part of the proposed project, was implemented to reduce any significant water pressure impacts that may arise to a less-than-significant level. In compliance with Mitigation Measure 4.12-2, the fire water demand associated with the proposed project was assessed and was determined be within the current system capacity and not to exceed demand projected in the 1994 LRDP, as amended (Achimore 2001). No further mitigation is required.

The 1994 LRDP EIR concluded that cumulative growth under the 1994 LRDP could result in a decreased level of service from City of Davis fire protection services (Impact 4.12-4). Although implementation of 1994 LRDP EIR Mitigation Measures 4.12-4 (a) and (b), incorporated as part of the project, would reduce the magnitude of this impact, this cumulative impact is considered significant and unavoidable because implementation of Mitigation Measure 4.12-4 (b) is not within the University's jurisdiction to enforce and monitor. The
The proposed project would contribute to, but not exceed, the increase in development and associated demand on City of Davis fire protection identified in the 1994 LRDP. This significant and unavoidable impact was adequately analyzed in the 1994 LRDP EIR and fully addressed by the Findings and Overriding Considerations adopted by The Regents in connection with its approval of the 1994 LRDP and certification of the 1994 LRDP EIR. There are no changed circumstances since the preparation of these documents that require reanalysis of cumulative impacts.

(a) The campus Police Department provides service to the project area. The 1994 LRDP EIR concluded that development allowed under the 1994 LRDP could result in a reduction of the level of police protection service provided by the UC Davis Police Department (Impact 4.12-3). Implementation of Mitigation Measure 4.12-3, incorporated as part of the project, would reduce increased demand on police protection services to a less-than-significant level. In compliance with 1994 LRDP EIR Mitigation Measure 4.12-3 (a), UC Davis police protection service demand is based on a ratio of personnel to increased population (0.72 sworn officers per 1,000 population of students, faculty, and staff). The proposed project would contribute two additional staff to the campus population, requiring 0.001 sworn officer. Recent figures show the campus has approximately 0.96 sworn officers per 1,000 students, faculty, and staff, which exceeds the campus standard and would adequately serve the proposed project. In accordance with 1994 LRDP EIR Mitigation Measure 4.12-3 (b), the campus Police Department has also updated its communications center with the addition of a state-of-the-art radio system. In addition, in compliance with Mitigation Measure 4.12-3 (c) the campus has Mutual Aid Agreements with law enforcement agencies from the City of Davis, Yolo County, and the state to ensure that adequate campus police protection services and response times are provided. Continued implementation of 1994 LRDP EIR Mitigation Measures 4.12-3 (a) through (c), incorporated as part of the proposed project, would reduce the project's impact to police protection services to a less-than-significant level.

The 1994 LRDP EIR concluded that cumulative growth under the 1994 LRDP could result in a decreased level of service from the City of Davis police protection services (Impact 4.12-5). Although implementation of 1994 LRDP EIR Mitigation Measures 4.12-5 (a) and (b), incorporated as part of the proposed project, would reduce the project's contribution to this impact, this cumulative impact is considered significant and unavoidable because implementation of Mitigation Measure 4.12-5 (b) is not within the University's jurisdiction to enforce and monitor. The proposed project would contribute to, but not exceed, growth levels and associated demand on City of Davis police protection services assessed under the 1994 LRDP. This significant and unavoidable impact was adequately analyzed in the 1994 LRDP EIR and fully addressed by the Findings and Overriding Considerations adopted by The Regents in connection with its approval of the 1994 LRDP and certification of the 1994 LRDP EIR. There are no changed circumstances since the preparation of these documents that require reanalysis of cumulative impacts.

a)(iii, iv) The proposed project's increase in permanent campus population (two additional employees) is within the population projections evaluated in the 1994 LRDP EIR (see Section IV, Consistency with the 1994 LRDP EIR). Therefore, the project's contribution to demand for local schools and parks was considered in the 1994 LRDP EIR. The 1994 LRDP EIR considered the indirect increase in the number of school age students in the Davis Joint
Unified School District and the increased demand for parks and recreational facilities resulting from growth allowed under the 1994 LRDP a less-than-significant impact.

The 1994 LRDP EIR concluded that cumulative development in the Davis area would generate an increased number of school age students in the Davis Joint Unified School District (Impact 4.13-5). Although implementation of 1994 LRDP EIR Mitigation Measure 4.13-5, incorporated as part of the proposed project, would reduce the project's contribution to this impact, this cumulative impact is considered significant and unavoidable because implementation of Mitigation Measure 4.13-5 is not within the University's jurisdiction to enforce and monitor. The proposed project would contribute to, but not exceed, population projections and associated demand on Davis Joint Unified Schools assessed under the 1994 LRDP. This significant and unavoidable impact was adequately analyzed in the 1994 LRDP EIR and fully addressed by the Findings and Overriding Considerations adopted by The Regents in connection with its approval of the 1994 LRDP and certification of the 1994 LRDP EIR. There are no changed circumstances since the preparation of these documents that require reanalysis of cumulative impacts.

The 1994 LRDP EIR concluded that cumulative buildout in the Davis area would increase demand for parks and recreational facilities. These cumulative impacts were considered less-than-significant because the City maintains adequate park and recreation uses to accommodate buildout of the City. In addition, the campus provides parks and open space available to the general public. The proposed project would contribute to, but not exceed, demand for parks and recreational facilities associated with buildout of the 1994 LRDP because population growth associated with the project is consistent with the growth projected in the 1994 LRDP.

a)(v) The proposed project would not result in a need for new or altered public services, other than those identified in the 1994 LRDP EIR, because both population and building space associated with the project are within the projections allowed under the 1994 LRDP. This impact would be considered less-than-significant and no mitigation is required.

b) Standards of significance for public services impacts that were used in preparation of the 1994 LRDP EIR are presented earlier in this section. These standards are consistent with the public services questions in the current Environmental Checklist. As discussed above, with the incorporation of 1994 LRDP EIR mitigation measures, the proposed project would not exceed the standards of significance identified in the 1994 LRDP EIR and would not result in new significant impacts related to public services that were not previously analyzed in the 1994 LRDP EIR.

Summary

1994 LRDP EIR Mitigation Measures 4.12-1, 4.12-2, 4.12-3 (a) through (c), 4.12-4 (a) and (b), 4.12-5 (a) and (b), and 4.13-5 are incorporated as part of the proposed project. The proposed project would not result in new or significant public services impacts that have not already been adequately assessed in the 1994 LRDP EIR.
15. Recreation

Background

The campus contains many park-like areas, including: landscaped open space between buildings; the Quad and Arboretum in the central campus; and the Putah Creek Reserve in the west campus. Recreational facilities on campus include structures and fields used for physical education, intercollegiate athletics, intramural sports, sports clubs, and general recreation.

1994 LRDP EIR Standards of Significance

The environmental analysis in the 1994 LRDP EIR considered an impact to recreation significant if campus or regional growth would:

- affect or require the designation of substantial additional parkland to remain in conformance with locally acceptable or adopted park standards.

1994 LRDP EIR Significant Impacts and Mitigation Measures

Impacts of campus growth through year 2005-06 on recreation issues were addressed in Section 4.13 (Community Services) of the 1994 LRDP Draft EIR. No significant recreation impacts were identified in the 1994 LRDP EIR or subsequent documents. The proposed project is within the scope of the recreation analysis presented in the 1994 LRDP EIR and there are no changed circumstances since the preparation of this document that require reanalysis of the cumulative impacts.

<table>
<thead>
<tr>
<th>Would the project:</th>
<th>Potentially Significant Impact</th>
<th>Less Than Significant with Mitigation Incorporated</th>
<th>Impact for which LRDP/Program EIR is Sufficient</th>
<th>Less Than Significant Impact</th>
<th>No Impact</th>
</tr>
</thead>
<tbody>
<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>
<tr>
<td>c) Exceed an applicable LRDP or Program EIR Standard of Significance?</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
</tr>
</tbody>
</table>
Discussion

a) The proposed project would increase the campus population by approximately two employees. This growth would not result in a significant increase in the use of existing campus recreation facilities such that substantial physical deterioration of the facilities would occur or be accelerated. In addition, this growth is within the population growth analyzed under the 1994 LRDP EIR. The 1994 LRDP includes plans for the development of 20 acres of new athletic fields and 12 acres of new recreational facilities to accommodate projected population growth under the 1994 LRDP. The proposed Aquatics Center would provide additional athletic facilities that would alleviate current overcrowding of existing campus aquatic sports and recreation facilities. Beneficial effects would occur.

The 1994 LRDP EIR, as amended, concluded that cumulative buildout in the Davis area would increase demand for parks and recreational facilities. This cumulative impact was considered less-than-significant because the City of Davis maintains adequate park and recreation uses to accommodate buildout of the city. In addition, the campus provides parks and open space available to the general public. The new facility would benefit City of Davis park and recreation facilities by providing space for the City of Davis Aquadart and Aquatic Masters swimming programs.

b) The proposed project is a recreational facility. The potential for the project to have significant effects on the environment are discussed in this Tiered Initial Study. As a component of the buildout projected under the 1994 LRDP EIR, construction and operation of the proposed facility would have physical effects on the environment as discussed and described in this Tiered Initial Study. With implementation of all relevant 1994 LRDP EIR and a proposed project specific mitigation measure, there is no substantial evidence that the project as mitigated may have a significant effect on the environment.

c) Standards of significance for recreation that were used in the preparation of the 1994 LRDP EIR are presented earlier in this section. These standards are consistent with the recreation questions in the current CEQA Environmental Checklist. Based on the discussion presented above, the proposed project would not exceed the standards of significance for recreation identified in the 1994 LRDP EIR. The project would not result in new impacts related to recreation.

Summary

The proposed project would not result in new or significant recreation impacts that have not already been adequately assessed in the 1994 LRDP EIR.
16. Utilities and Service Systems

Background

The proposed project would use campus utilities and service systems including solid waste, domestic water, utility water, sewer, storm drainage, steam, electricity, and telecommunications. The proposed Aquatics Center would not connect to the campus chilled water system and instead would be cooled by air cooled chillers located outside of the building. The proposed project would not use natural gas. The campus utility and service systems that would serve the proposed project are discussed below.

Solid Waste

UC Davis operates a Class III sanitary landfill and provides solid waste collection and disposal services for the campus. Currently, the campus generates approximately 40 to 50 tons of solid waste per day. The permitted capacity of the landfill is 500 tons per day. The campus is in the process of closing Waste Management Unit 1, and Waste Management Unit 2 is currently becoming operational. Waste Management Unit 2 has an anticipated life to 2030.

Domestic and Utility Water

Domestic water is supplied from the deep aquifer by the campus domestic/fire water system. Utility water is supplied from the shallow/intermediate aquifer by the campus utility water system. The deep and shallow/intermediate aquifers are discussed in Item 9, the Hydrology and Water Quality section, of this Environmental Checklist. The current peak hour capacity of the campus domestic water supply reservoir and wells is approximately 10,892 gpm. Total peak hour domestic water demand at buildout of the 1994 LRDP is estimated to be 12,593 gpm (West Yost 2000a). The peak hour current capacity of the campus utility water distribution system is approximately 5,365 gpm. Total peak maximum utility water demand at buildout of the 1994 LRDP is estimated to be 5,180 gpm (West Yost 2000b).

Wastewater

The existing campus wastewater system is operated by the campus and is not connected to any regional facility. Major system elements include collectors, sanitary sewer mains, eight lift stations, a treatment plant, and an effluent outfall to the South Fork of Putah Creek near Old Davis Road. The new campus Wastewater Treatment Plant, which began operation in March 2000, is more reliable to operate than the outdated treatment system that was in use when the 1994 LRDP was prepared. The current peak month capacity of the UC Davis Wastewater Treatment Plant (WWTP), as regulated under the existing NPDES permit, is 2.7 mgd. The WWTP was designed to accommodate the growth anticipated in the 1994 LRDP through 2005-06.
Storm Drainage

The existing stormwater drainage system on campus consists of collectors, pump stations, transmission mains, and the Arboretum Waterway, which discharge into both the South Fork and North Fork of Putah Creek. Storm drainage from the central campus is discharged to the Arboretum Waterway (a stormwater retention basin for the central campus). Rainfall overflow is pumped into the South Fork during large storm events. The campus stormwater system is discussed in Item 9, the Hydrology and Water Quality section, of this Environmental Checklist.

Steam

The campus Central Heating and Cooling Plant produces steam to provide heat to buildings in the central campus. Total steam capacity at the Central Heating and Cooling Plant is 295,000 pounds per hour (lbs/hr). Under normal weather conditions, current use is estimated at 210,000 lbs/hr. Under extreme hot or cold weather conditions, the steam system can operate at approximately 220,000 lbs/hr. The Central Plant has recently been set up with the ability to connect to a temporary boiler for use in emergencies, and the campus is currently evaluating further expansion options.

Electricity

The campus receives power from Pacific Gas and Electric Company and the Western Area Power Administration through the Campus Main Receiving Station located south of I-80. Operations on the periphery of campus (outside the campus electrical system) are also served by ENRON. The Main Receiving Station converts the power from the transmission level voltage of 115kV to the campus distribution voltage of 12.47 kV. Recent estimated annual electrical usage on campus was approximately 170 million-kilowatt hours per year.

Telecommunications

The campus installed its telecommunications system in 1987. The main switching facility is located in the Telecommunications Building, east of the Central Heating and Cooling Plant. The majority of all voice and data switching equipment and network infrastructure facilities are owned by the campus and operated by UC Davis Communications Resources Service. As new buildings are constructed, Communications Resources coordinates with the UC Davis Office of Architects and Engineers to design and direct the installation of intra- and inter-building telecommunications facilities in accordance with established standards.

1994 LRDP EIR Standards of Significance

The environmental analysis in the 1994 LRDP EIR considered an impact to utilities and service systems significant if campus or regional growth would:

- result in a significant increase in the consumption of potable water and require substantial expansion of water supply treatment or distribution;
• result in the need for increased chilled water or steam generation capacity or major
distribution improvements;

• require substantial expansion of wastewater treatment and distribution capacity;

• exceed available landfill capacity;

• require substantial expansion of the telecommunication service and distribution
system;

• create an energy demand in excess of supply or major infrastructure; or

• require the development of new sources of energy.

1994 LRDP EIR Significant Impacts and Mitigation Measures

Impacts of campus and related regional growth through year 2005-06 on utilities and service
systems are addressed in Sections 4.14 (Utilities and Infrastructure) and 4.15 (Energy) of the 1994
LRDP Draft EIR. Significant impacts identified in the 1994 LRDP EIR that are relevant to the
proposed project are presented in the following table. The levels of significance before and after
application of mitigation measures identified in the 1994 LRDP EIR are also presented in the
following table. The proposed project is within the scope of the utilities and service systems
analysis in the 1994 LRDP EIR, and there are no changed circumstances since the preparation of
this document that require reanalysis of cumulative impacts. Potential impacts to the deep and
shallow/intermediate aquifer are addressed in the Hydrology and Water Quality section of this
checklist.

<table>
<thead>
<tr>
<th>LRDP EIR IMPACT</th>
<th>Level of Significance Prior to Mitigation</th>
<th>Level of Significance After/With Mitigation</th>
</tr>
</thead>
<tbody>
<tr>
<td>4.14-2</td>
<td>S</td>
<td>LS</td>
</tr>
<tr>
<td>4.14-4</td>
<td>S</td>
<td>LS</td>
</tr>
<tr>
<td>4.14-6</td>
<td>S</td>
<td>LS</td>
</tr>
</tbody>
</table>

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

Mitigation measures identified in the 1994 LRDP EIR that are applicable to the proposed project
and that will be required as part of project implementation include the following:

• **LRDP EIR Mitigation Measure 4.14-2(a)** - Prior to final project design, the campus shall review
each project to determine if existing water supplies are adequate. When determined necessary, the campus shall construct additional wells into the deep aquifer to meet existing and future domestic water demand.
• **LRDP EIR Mitigation Measure 4.14-2(b)** - Implement Mitigation Measure 4.14-1(a) and (b).

  Please see Mitigation Measures 4.14-1(a) and (b) under Item 9, Hydrology and Water Quality, of this Environmental Checklist

• **LRDP EIR Mitigation Measure 4.14-4** - The campus shall review each project to determine if existing water supply is adequate. When determined necessary, the campus shall develop additional wells into the shallow/intermediate aquifer to meet the water demands of the campus utility water system.

• **LRDP EIR Mitigation Measure 4.14-6(a)** - Until the existing wastewater treatment plant is upgraded or replaced by facilities with the capacity to treat loads expected from all contemplated campus development, the campus shall review each project to ensure that no new structures are constructed that would cause the wastewater treatment plant to exceed its permitted capacity.

• **LRDP EIR Mitigation Measure 4.14-6(b)** - If implementation of the project would result in an increased load above the current capacity, the campus shall employ measures to either increase the plant's capacity or reduce the existing load, such that no permit standards are exceeded. Possible strategies to increase the plant's capacity or reduce the existing load could include the following:

  (i) incrementally increasing the total suspended solids capacity at the existing plant; or

  (ii) reducing the volume of wastewater generated by existing facilities through implementation of water conservation measures.

Mitigation measures listed above are incorporated into the proposed project, and the proposed project, as mitigated, is evaluated in the checklist below.

<table>
<thead>
<tr>
<th>UTILITIES AND SERVICE SYSTEMS</th>
<th>Potentially Significant Impact</th>
<th>Less Than Significant with Mitigation Incorporated</th>
<th>Impact for which LRDP/Program EIR is Sufficient</th>
<th>Less Than Significant Impact</th>
<th>No Impact</th>
</tr>
</thead>
<tbody>
<tr>
<td>Would the project:</td>
<td></td>
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<td></td>
</tr>
<tr>
<td>a) 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>
</tbody>
</table>
## UTILITIES AND SERVICE SYSTEMS

<table>
<thead>
<tr>
<th>Would the project:</th>
<th>Potentially Significant Impact</th>
<th>Less Than Significant with Mitigation Incorporated</th>
<th>Impact for which LRDP/Program EIR is Sufficient</th>
<th>Less Than Significant Impact</th>
<th>No Impact</th>
</tr>
</thead>
<tbody>
<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>
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</tr>
<tr>
<td>e) Result in a determination by the wastewater treatment provider that serves or may serve the project that it has adequate capacity to serve the project's projected demand in addition to the provider's existing commitments?</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 applicable 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 of new electrical or natural gas 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>i) Require or result in the construction of new telecommunication facilities, the construction of which would cause significant environmental effects?</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
</tr>
<tr>
<td>j) Exceed an applicable LRDP or Program EIR Standard of Significance?</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
</tr>
</tbody>
</table>

## Discussion

a) The proposed project would discharge wastewater into the campus sanitary sewer system. The proposed Aquatics Center would connect to the campus sanitary sewer system at a point
located northeast of the proposed facility, near the bike tunnel under La Rue Road. The proposed project does not include uses that are likely to result in discharge of inappropriate materials to the sanitary sewer system, and the project would be required to comply with the campus pretreatment program. However, as discussed further in Item 9 (a) in the Hydrology and Water Quality section of this Environmental Checklist, the December 2000 results of quarterly effluent testing from the campus WWTP detected copper in excess of the permitted level. The WWTP copper permit limit is 13 ppb, and the results of December 2000 sampling indicated copper concentrations of 16 ppb in the WWTP effluent.

The circumstances surrounding effluent testing for the first quarter of 2001 were not typical. Effluent testing from one laboratory (that was experiencing several problems with its equipment) showed results for several parameters that were orders of magnitude higher than any other results the campus has experienced. This laboratory found copper levels of 14 ppb, just over the 13 ppb effluent limit. The same samples were sent to another certified laboratory and these results showed copper was non-detect (less than 5 ppb). Both sets of results were reported to the Regional Water Quality Control Board for evaluation. Under the standard permit provisions, the average concentration is used to evaluate permit compliance in situations like this. Therefore, given the average of these two results, the WWTP was in compliance with the permit limits for the first quarter of 2001.

Results from the second quarter of 2001 for samples collected in June showed compliance, though just barely, with the permit limits for copper. The 1-hour average result was 14 ppb, compared to the permit limit of 20 ppb, and the 4-day average result was 13 ppb, compared to the permit limit of 13 ppb.

The campus is pursuing several steps to bring copper concentrations into compliance, including strictly enforcing the pretreatment program and aggressively enforcing local limits by identifying and removing sources of copper to the wastewater where feasible. 1994 LRDP EIR Mitigation Measures 4.8-6 (a) through (c), incorporated as part of the proposed project, require the campus to continue monitoring WWTP effluent discharge, modify the pretreatment program as needed to ensure compliance, and apply and comply with requirements of NPDES WDRs for the campus WWTP. In addition, WWTP Replacement Project EIR Mitigation Measure 4.1-6 (a) requires the campus to strictly implement the pretreatment program and enforce the local limits to reduce pollutant concentrations and ensure NPDES permit limits will be met. WWTP Replacement Project EIR Mitigation Measure 4.1-6 (b) requires the campus to modify the operation and/or treatment processes at the WWTP as necessary to comply with all applicable permit conditions related to toxics.

The proposed project would not be an atypical source of copper and would not have a substantial effect on copper concentrations in effluent (see Item 9 (a)).

1994 LRDP EIR Mitigation Measures 4.8-6 (a) through (c), incorporated as part of the proposed project, require the campus to continue monitoring WWTP effluent discharge, modify the pretreatment program as needed to ensure compliance, and apply and comply with requirements of NPDES WDRs for the campus WWTP. In addition, WWTP Replacement Project EIR Mitigation Measure 4.1-6 (a) requires the campus to strictly implement the pretreatment program and enforce the local limits to reduce pollutant concentrations and
ensure NPDES permit limits will be met. WWTP Replacement Project EIR Mitigation Measure 4.1-6 (b) requires the campus to modify the operation and/or treatment processes at the WWTP as necessary to comply with all applicable permit conditions related to toxics.

Implementation of mitigation measures previously adopted as part of the 1994 LRDP and WWTP Replacement Project will reduce the copper concentration in WWTP effluent to within the permit limit. No new significant impacts have been identified and no new mitigation measures are required.

b) Wastewater from the proposed project would be treated at the campus Wastewater Treatment Plant. The plant, which began operation in March 2000, has a permitted capacity of 2.7 mgd, sufficient for development allowed under the 1994 LRDP including the proposed project. Therefore, no impact would occur.

c) The proposed project site would slope to drain to an existing storm drain inlet at a point located east of the proposed project site, adjacent to the western side of La Rue Road. As described in Item 9, the Hydrology and Water Quality section of this checklist, the proposed project would create additional paved surfaces (approximately three acres). However, the campus determined that the capacity of the existing storm drainage system at the point of connection would be sufficient for the proposed project (Achimore 2001). In addition, an effort would be made to minimize impervious surfaces during landscape design, and storm water drainage would be channeled, where possible, through swales and over other pervious surfaces to filter runoff and maximize percolation. The proposed project’s impact on the capacity of the campus storm drainage system would be less-than-significant.

d) The proposed project would require domestic water supplied by the campus domestic/fire water system, which obtains water from the deep aquifer. Utility water, obtained from the shallow/intermediate aquifer, would be required by the proposed project for minimal landscape irrigation. Please review Item 9, the Hydrology and Water Quality section of this Environmental Checklist, for a discussion of potential impacts to these aquifers.

Domestic Water

The proposed project would connect via a new line to the existing domestic water line at a point located west of the proposed site, near the southwestern corner of Parking Lot 54a.

As discussed in Item 9(b) of this Environmental Checklist, the proposed Aquatics Center's total domestic water demand would be approximately 5 mgy, an amount that is well within the domestic water use projected for 2005-06 (as discussed further in Item 9 b)

The domestic water flow rate serving the facility during general operations would be a maximum of approximately 140 gpm. However, to accommodate the backwash system for the pool filters that would occur once every 7 to 10 days, the system would be sized for a maximum capacity of 300 gpm. The current peak hour capacity of the campus domestic water supply reservoir and wells is approximately 10,892 gpm. Peak hour demand at buildout of the 1994 LRDP, including the demand generated by the proposed project, is estimated to be 12,593 gpm (West Yost 2000a).
The 1994 LRDP EIR identified that development allowed under the 1994 LRDP would directly increase the demand for water from the campus domestic/fire water system (Impact 4.14-2). Consistent with 1994 LRDP EIR Mitigation Measure 4.14-2(a), incorporated into the proposed project, the domestic water system was evaluated to determine if adequate supply exists to meet the peak use and peak fire-flow demands of the proposed project. The campus has determined that capacity exists at the proposed connection to the existing campus domestic water supply system (Achimore 2001). Therefore, this impact would be less-than-significant.

**Utility Water**

The proposed project would connect to an existing utility water line at a point west of the proposed site, near the southeastern corner of Parking Lot 54a. The proposed project would include approximately 0.6 acre of softscape grounds and would use utility water to irrigate its landscaping. The utility water flow rate to the proposed facility would serve a peak demand of approximately 900 gpm. The current peak hour capacity of the campus utility water distribution system is approximately 5,365 gpm. Peak hour utility water demand by 2006 is estimated to be 5,180 gpm (West Yost 2000b). The 1994 LRDP EIR identified that development allowed under the 1994 LRDP would directly increase the amount of water demanded from the campus utility water system (Impact 4.14-4). Consistent with 1994 LRDP EIR Mitigation Measure 4.14-4, the campus reviewed the existing utility water system and determined that capacity exists at the proposed point of connection to serve the proposed project (Achimore 2001). Therefore, this impact would be less-than-significant.

**Chilled Water and Steam**

The proposed Aquatics Center would not connect to the existing campus chilled water system and instead would be cooled by air cooled chillers located outside of the building. Therefore, there would be no impact on chilled water distribution capacity as a result of the proposed project. Steam produced from the campus Central Heating and Cooling Plant would heat the proposed building and pool. The proposed Aquatics Center would connect to the existing campus steam system at a point located east of Garrod Drive and south of La Rue Road. The Central Heating and Cooling Plant produces steam on campus and has a total steam capacity of approximately 295,000 lbs/hr. Under normal weather conditions, current steam use on campus is estimated at 210,000 lbs/hr. Under extreme hot or cold weather conditions, the steam system can operate at approximately 220,000 lbs/hr. The proposed project would have a peak demand of approximately 10,371 lbs/hr. However, average use would be lower. This would increase peak steam demand, however, implementation of utility upgrade projects currently under consideration would help meet total campus demand. In addition, the campus reviewed the existing central campus steam system and determined that capacity exists at the proposed point of connection to serve the proposed project (Achimore 2001). Therefore, the project's impact on the steam system capacity would be less-than-significant.

Solar heating was reviewed for the proposed pool, but this system was rejected because the payback would not be economically feasible. The option was determined economically impractical due to high costs associated with initial purchases, system maintenance, short lived
equipment, and the backup system that would be required to support the solar system on days with limited sunshine. In addition, the project would not have suitable space for the open area needed to support solar panels. The project's proposed heating and cooling systems would be controlled by the campus Energy Management System.

e) The project would connect to the existing campus sanitary sewer system at a point located northeast of the proposed facility, near the bike tunnel under La Rue Road. The facility's gravity sewer system would be sized to handle the 300 gpm flow rate associated with filter backwash operations (that would occur every 7 to 10 days). However, general sewer service from the building would be a maximum of approximately 140 gpm. The campus determined that adequate capacity exists at this point of connection to serve the proposed project (Achimore 2001). Therefore, the proposed project's impact on wastewater collection system capacity is less-than-significant.

f) The campus landfill has sufficient capacity to accommodate the increased quantity of solid waste generated by the implementation of the 1994 LRDP. This projection assumes an annual growth rate of 1.8 percent, which represents generation by 2006 of approximately 60 tons of solid waste per day. Currently, the campus generates approximately 40 to 50 tons of solid waste per day. The proposed project would not generate waste that exceeds the permitted capacity, nor would it exceed 1994 solid waste projections because the proposed project is within the scope of the 1994 LRDP and LRDP EIR. Therefore, the proposed project's impact on the capacity of the campus landfill would be less-than-significant.

The 1994 LRDP EIR concluded that development allowed under the 1994 LRDP would result in increased generation of solid waste in the Davis area. This cumulative impact was considered less-than-significant because adequate landfill capacity exists to accommodate buildout of the City of Davis. The proposed project would contribute to, but not exceed, demand for solid waste disposal capacity associated with buildout of the 1994 LRDP.

g) The proposed project would comply with all applicable federal, state, and local statues and regulations related to solid waste. Therefore, no impact would occur.

h) **Electricity**

The proposed project, as required of all new buildings constructed in California, would comply with Title 20, Energy Building Regulations, and Title 24, Energy Conservation Standards of the California Code of Regulations. It is campus policy to exceed Title 24 code requirements by 10 percent and to encourage design choices that allow provision of the most energy efficient buildings possible. As discussed above under "d", steam from the central campus system (not electricity) would be used to heat the proposed building and pool. The project would be included in the campus's load management program, which voluntarily reduces loads when the state's energy reserves fall below critical levels.

Peak energy demand for this project is initially estimated at 150 kVA, a demand that would contribute to the peak demand for electricity on campus. However, the proposed project would begin operation close to the completion date of the Electrical Improvements Phase 2B
project (in 2002). Phase 2B improvements will provide a new system capacity of 60,000 kVA, sufficient capacity to meet the electrical needs of recently completed facilities and anticipated new campus development, including the proposed project.

There is current uncertainty with respect to the cost of electricity throughout California. Because it is early to determine future sources of energy, it would be speculative to evaluate environmental impacts from the construction and operation of new generating facilities that may be triggered by the project in conjunction with other development in the region. In addition, the California Energy Commission conducts environmental review for all large generating facilities that are proposed in California. The Commission prepares a CEQA-equivalent document that analyzes and discloses environmental impacts from the construction and operation of new power plants and imposes mitigation measures as conditions of project approval to address significant impacts.

Electricity would be provided for the proposed project from the campus's distribution system. The project would connect to the campus grid at a new pad-mounted transformer (preliminarily rated at 150 kVA) located adjacent and southwest of the proposed Aquatics Center site. A main electrical room in the Aquatics Center would contain a main power distribution panelboard. Emergency power would be provided for egress lighting and exit signs in offices and similar areas via integral battery packs. Wall-pack emergency light fixtures would be used in electrical, storage, and equipment rooms. The campus evaluated that adequate capacity exists to serve electricity to the proposed project (Achimore 2001). Therefore, impacts on the electrical distribution system capacity would be less-than-significant.

As new buildings are constructed, UC Davis Communications Resources coordinates with the UC Davis Office of Architects and Engineers to design and direct the installation of intra- and inter-building telecommunications facilities in accordance with established standards. The Aquatics Center would connect to an existing telecommunication line at a point located west and adjacent to the proposed site. Ample telephone lines will be made available when voice over fiber cable is supplied to buildings in the Health Sciences District. Reallocation of these lines for the proposed project is expected to occur prior to occupation of the Aquatics Center. With this reallocation, the campus determined the connection would be adequate to serve the proposed project (Achimore 2001). Therefore, the proposed project's impact on the campus telecommunication distribution capacity is less-than-significant.

Standards of significance for utilities and service systems impacts that were used in preparation of the 1994 LRDP EIR are presented earlier in this section. These standards are consistent with the utilities and service systems questions in the current Environmental Checklist. Based on the discussion presented above, with the incorporation of 1994 LRDP EIR mitigation measures, the proposed project would not exceed the standards of significance in the 1994 LRDP EIR. The project would not result in new significant impacts related to utilities and service systems that were not previously analyzed in the 1994 LRDP EIR.

Summary

1994 LRDP EIR Mitigation Measures 4.14-2 (a) and (b), 4.14-4, and 4.14-6 (a) and (b) are
incorporated into the proposed project. The proposed project would not result in new or significant utilities and service systems impacts that have not already been adequately assessed in the 1994 LRDP EIR.
### 17. **Mandatory Findings of Significance**

<table>
<thead>
<tr>
<th>MANDATORY FINDINGS OF SIGNIFICANCE</th>
<th>Potentially Significant Impact</th>
<th>Less Than Significant with Mitigation Incorporated</th>
<th>Impact for which LRDP/Program EIR is Sufficient</th>
<th>Less Than Significant Impact</th>
<th>No Impact</th>
</tr>
</thead>
<tbody>
<tr>
<td>a) Does the project have the potential to degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, reduce the number or restrict the range of a rare or endangered plant or animal or eliminate important examples of the major periods of California history or prehistory?</td>
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<tr>
<td>b) Does the project have impacts that are individually limited, but cumulatively considerable? (“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>
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<td>c) Does the project have environmental effects that will cause substantial adverse effects on human beings, either directly or indirectly?</td>
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</table>

a) The proposed project would not significantly affect fish or wildlife habitat, nor would it eliminate examples of California history or prehistory. The proposed project would result in one new potentially significant impact to biological resources, but proposed Project-Specific Mitigation Measure 1 would reduce this impact to a less-than-significant level. Cumulative regional impacts could be significant, but mitigation measures to reduce these potentially significant impacts to a less-than-significant level are not within the jurisdiction of the University of California to enforce and monitor. These potentially significant and unavoidable impacts were adequately analyzed in the 1994 LRDP EIR, and addressed in the Findings and Statement of Overriding Considerations adopted by The Regents in connection with approval of the 1994 LRDP and certification of the 1994 LRDP EIR. There are no changed circumstances since the preparation of these documents that require reanalysis of cumulative impacts.
b,c) The proposed project is consistent with the 1994 LRDP, as described in Section IV of this Tiered Initial Study. The proposed project would not contribute to significant unavoidable impacts identified in the 1994 LRDP EIR related to agriculture resources. It would incrementally contribute to, but not exceed, significant and unavoidable impacts related to transportation/circulation, noise, air quality, hazards and hazardous materials, biological resources, hydrology and water quality, geology and soils, cultural resources, aesthetics, public services, and utilities and service systems. These potentially significant and unavoidable impacts were adequately analyzed in the 1994 LRDP EIR, and addressed in the Findings of Overriding Consideration adopted by The Regents in connection with approval of the 1994 LRDP and certification of the 1994 LRDP EIR. There have been no changed circumstances since the preparation of these documents that require reanalysis of cumulative impacts.
18. **Fish and 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
VIII. PROJECT-SPECIFIC MITIGATION MEASURE

The following project-specific mitigation measure would be implemented as part of the proposed project.

Project-Specific Mitigation Measure 1. If burrowing owls are observed within 250 feet of the proposed project site, prebreeding and preconstruction season exclusion measures shall be implemented following CDFG guidelines to preclude burrowing owl occupation of the project site. This shall involve installing artificial nest boxes in fall or winter 2001/2002, closing all ground squirrel burrows, and passively relocating owls by installing one-way exit doors on occupied burrows. In addition, a visual barrier shall be installed along the edge of the construction area to minimize visual disturbance of the owls, and a biological monitor shall visit the site twice weekly during the construction period.
IX. MITIGATION MONITORING PROGRAM

CEQA requires that a Lead Agency establish a program to report on and monitor measures adopted as part of the environmental review process to mitigate or avoid significant effects on the environment. This Mitigation Monitoring Program (MMP) is designed to ensure that the mitigation measures identified in the Tiered Initial Study are implemented. Applicable mitigation measures from the 1994 LRDP EIR will be implemented as part of the proposed project pursuant to the previous MMPs adopted by The Regents as part of the 1994 LRDP on September 23, 1994.

The MMP for the Aquatics Center Project, as outlined in the following table, describes monitoring and reporting procedures, monitoring responsibilities, and monitoring schedules for the mitigation measure identified in the Tiered Initial Study. All monitoring actions, once completed, will be reported in writing to the UC Davis Office of Resource Management and Planning, which will maintain mitigation monitoring records for the proposed project. The MMP will be considered by the campus in conjunction with project review and will be included as a condition of project approval.

The components of this table are addressed briefly below:

**Project Specific Mitigation Measure:** The project-specific mitigation measure identified in the Biological Resources section of this Tiered Initial Study is presented.

**Monitoring and Reporting Procedure:** Identifies the action(s) that must be completed for the mitigation measure to be considered implemented.

**Mitigation Timing:** Identifies the timing for implementation of each action. The table indicates the typical project cycle when the mitigation measure must be implemented in order to effectively accomplish the intended outcome.

**Monitoring Responsibilities:** Identifies the UC Davis unit responsible for undertaking the required action and monitoring the mitigation measure.
## Mitigation Monitoring Program

<table>
<thead>
<tr>
<th>Mitigation Measure</th>
<th>Monitoring and Reporting Procedure</th>
<th>Mitigation Timing</th>
<th>Mitigation Responsibility</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. If burrowing owls are observed within 250 feet of the proposed project site,</td>
<td>If preconstruction surveys note active burrowing owl burrows within 250 feet of the proposed project site, written notification of proposed actions and pending decisions regarding the project would be provided to the California Department of Fish and Game.</td>
<td>Burrowing owl relocation would occur during the fall and winter preceding the initial construction season. If preconstruction surveys identify active burrows within 250 feet, visual barriers would be installed along the edge of the construction site before the start of construction. If active burrows are identified within 250 feet, monitoring would occur twice weekly during construction. If not, monitoring would occur approximately every three weeks.</td>
<td>Office of Resource Management and Planning</td>
</tr>
</tbody>
</table>
X. COMMENTS AND RESPONSES TO COMMENTS

The Draft Tiered Initial Study for the Aquatics Center Project was circulated for public and agency review from July 2 to August 1, 2001. Comment letters were received during this period from the following agencies/individuals:

Letter 1:  Governor's Office of Planning and Research  
State Clearinghouse  
Terry Roberts, Senior Planner  
1400 Tenth Street  
Sacramento, California 95812-3044

Letter 2:  California Regional Water Quality Control Board  
Central Valley Region  
Christine Palisoc, Environmental Scientist  
Storm Water Unit  
3443 Routier Road, Suite A  
Sacramento, California 95827-3003

Letter 3:  California Department of Fish and Game  
Sacramento Valley and Central Sierra Region  
Larry L. Eng, Ph.D., Assistant Regional Manager  
Fisheries, Wildlife and Environmental Programs  
1701 Nimbus Road, Suite A  
Rancho Cordova, California 95670

These comment letters and responses to comments are provided on the subsequent pages. Each letter and each comment within each letter has been assigned a number. For example, the first comment in Letter 1 is numbered 1-1. Responses are numbered to correspond with appropriate comments.
Response to Comment 1-1:

Comment noted. This letter indicates that the campus complied with the State Clearinghouse review requirements for draft environmental documents, pursuant to the California Environmental Quality Act. Although the letter also indicates that no comments were received on the Aquatics Center project during the review period, two comment letters were received after the comment period closed. These comment letters and responses to comments are presented on the following pages.
Letter 2: California Regional Water Quality Control Board

Response to Comment 2-1:

As indicated in the Hydrology and Water Quality Section (Item 9a) of the attached Environmental Checklist, construction activity associated with the proposed project would be covered under the General Permit for Discharge of Storm Water Associated with Construction for the entire Davis campus. In compliance with the permit, a New Construction Project Information Form would be submitted for the proposed project before construction begins. In addition, a Storm Water Pollution Prevention Plan that includes site-specific Best Management Practices would be prepared and implemented.

Response to Comment 2-2:

Comment noted. Dewatering activities are not anticipated to occur as part of the proposed project. In addition, it is campus policy to discharge water used in pipeline testing/flushing to the campus sewer system, as opposed to the storm drainage system.
Response to Comment 3-1:

Comment noted. The comment indicates that the California Department of Fish and Game considers that with proper and timely implementation of mitigation measures identified in the Draft Tiered Initial Study to mitigate potential impacts to special status species, impacts on biological resources would be reduced to less-than-significant levels, and that a mitigated negative declaration is appropriate for the project.

Response to Comment 3-2:

The campus will pay California Department of Fish and Game fees under Public Resources Code Section 21089, and as defined by Fish and Game Code Section 711.4, at the time the Notice of Determination for the Aquatics Center Project is filed.

Response to Comment 3-3:

Pursuant to Public Resources Code Sections 21092 and 21092.2 and the Mitigation Monitoring Program for the proposed project, the campus will provide the Department of Fish and Game with written notification of proposed actions and pending decisions regarding the project.
XI. REFERENCES

Achimore, Alex. 2001. Written communication from Alex Achimore, UC Davis Architects and Engineers. February 2, 2001.


XII. AGENCIES AND PERSONS CONTACTED

Alex Achimore, UC Davis Office of Architects and Engineers.

Jan Barnett, UC Davis Student Affairs.

XIII. REPORT PREPARERS

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Matt Dulcich, Associate Environmental Planner, UC Davis Office of Resource Management and Planning

A. Sidney England, Environmental Planner, UC Davis Office of Resource Management and Planning