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## Summary of Environmental Impacts and Mitigation Measures

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### 2.1 INTRODUCTION

This Environmental Impact Report (EIR) evaluates the potential for environmental impacts from the growth of the University of California, Santa Cruz (UC Santa Cruz) under the proposed 2005 Long Range Development Plan (hereinafter 2005 LRDP). Three projects proposed for implementation on the UC Santa Cruz campus under that plan are also considered in this EIR: the Infrastructure Improvements Project, the Family Student Housing Redevelopment Project, and the 2300 Delaware Avenue Project. This summary highlights the major areas of importance in the environmental analysis for the proposed 2005 LRDP, as required by §15123 of the California Environmental Quality Act (CEQA). It also provides a brief description of the 2005 LRDP, project objectives, community/agency issues, alternatives to the 2005 LRDP, and areas of controversy known to the University. In addition, this chapter provides a table summarizing: (1) the potential environmental impacts that would occur as the result of campus growth under the 2005 LRDP; (2) the level of impact significance before mitigation; (3) the recommended mitigation measures that would avoid or reduce significant environmental impacts; and (4) the level of impact significance after mitigation measures are implemented. A second table compares the anticipated impacts of the proposed project with those of each alternative. Separate impact analyses, including impact summary tables for the three projects listed above, are provided in Volume III of this EIR.

### 2.2 PROJECT DESCRIPTION

The UC Santa Cruz 2005 LRDP is the comprehensive land-use plan that would guide physical development of the campus to support its teaching, research and public service mission. The 2005 LRDP identifies institutional goals and development objectives, and maps existing and proposed campus land uses. The Board of Regents of the University of California (The Regents) adopted the 1988 LRDP for UC Santa Cruz as a guide for physical development in support of campus needs and goals and campus population growth projected through 2005-06. As of academic year 2003-04, the Campus was within the projected overall student enrollment growth levels established by the 1988 LRDP. However, projected increases in enrollment over the next few years are expected to result in population growth that would exceed the population analyzed in the 1988 LRDP EIR. Therefore, UC Santa Cruz has prepared a new LRDP (2005 LRDP) to plan for anticipated growth through 2020. In accordance with the California Master Plan for Higher Education, which guarantees access to the University of California for the top 12.5 percent of California's public high school graduates, all UC campuses are planning to increase

enrollment. The University of California projects that system-wide, full-time equivalent (FTE)<sup>1</sup> enrollment will increase by approximately 63,000 between 1998 and 2010. In 2000, the University of California's Office of the President asked each campus to consider the feasibility of implementing campus-specific enrollment targets. In response, UC Santa Cruz has prepared the proposed 2005 LRDP which plans for an estimated campus enrollment of up to a three-quarter average of 21,000 FTE students, and a total of approximately 5,600 faculty and staff by academic year 2020-21. The 2005 LRDP and the 2005 LRDP EIR have been prepared in compliance with CEQA §21080.09.

UC Santa Cruz also proposes the following three projects:

- **Infrastructure Improvements Project:** UC Santa Cruz proposes to implement a series of improvements to the utilities and infrastructure on campus, primarily to address problems and deficiencies in the existing systems, but also to provide additional capacity to accommodate some of the planned growth. The systems that will be improved include the storm water drainage system, the domestic/fire protection water system, the campus core cooling and heating water systems, the electrical system, and the natural gas system.
- **Family Student Housing Redevelopment Project:** UC Santa Cruz proposes to demolish the existing 199-unit family student housing complex on Heller Drive on the main campus, and to redevelop the site in two development phases. The housing complex when completed would provide approximately 400 apartment units, consisting of approximately 100 one-bedroom units, 200 two-bedroom units, and 100 three-bedroom units. Amenities in the proposed project include a child care facility that would replace and expand existing facilities to expand child care capacity on the site from 78 at present to 178 children. The redevelopment would also include a community center, administrative offices, laundry areas, parking, bicycle storage, playgrounds, roads, paths, lighting, and landscaping.
- **2300 Delaware Avenue Project:** Under the proposed project, the Campus would remodel the interior of Building C at 2300 Delaware Avenue for use as office and research space for faculty, staff, some graduate students, and potential campus affiliates. A total of 482 new employees would occupy Building C. The Campus would also make minor interior modifications in Buildings A and B, to accommodate 54 employees in those two buildings in addition to the 246 employees previously approved for the facility.<sup>2</sup>

## 2.3 PROJECT OBJECTIVES

The purpose of the proposed 2005 LRDP is to guide the physical planning and continuing development of the UC Santa Cruz campus so as to allow the Campus to achieve its mission of teaching, research, and public service. Though UC Santa Cruz is a relatively young campus, it has established itself as a world-class institution that balances commitments to undergraduate and graduate education and training with an equally strong commitment to research. Fifty-two majors are available to undergraduates in the

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<sup>1</sup> For quarter system campuses, including UC Santa Cruz, a full-time equivalent (FTE) student is defined as (1) an undergraduate student who enrolls for 45 credit hours per academic year; or (2) a graduate student (master's level or doctoral student not yet advanced to candidacy) enrolled in 36 credit hours per year; or (3) a graduate doctoral student who has been advanced to candidacy. Since not all students take full course loads, the number of FTE students is generally somewhat lower than the actual total number of students enrolled. However, for UC Santa Cruz, the number of FTE students is very close to the headcount, which is the actual total number of students enrolled.

<sup>2</sup> Buildings A and B will be initially occupied by 246 employees in late 2005 under a previous approval.

humanities, physical and biological sciences, social sciences, arts and engineering. Graduate students pursue degrees in 33 fields. The academic goals of the Campus are to continue to fulfill its academic mission, build and expand upon its traditional strengths, and anticipate changing instructional and research programs. The proposed 2005 LRDP is also shaped by Campus values, articulated in the 1960s and retained over the past four decades, of clustered and circumscribed development, energy conservation, preservation of the natural environment, and strong community relationships.

The objectives of the proposed UC Santa Cruz 2005 LRDP are to:

- Provide for instruction, research, support, residential facilities, and infrastructure needed to:
- Accommodate anticipated enrollment growth and program development
- Support the breadth and depth of undergraduate and graduate academic programs and professional degree programs
- Accommodate the expansion of high-quality research programs
- Allow the Campus to expand its contribution to the public cultural life and economic well being of the region through public programs, events, and services
- Develop facilities to foster a dynamic intellectual and social community, specifically:
- Locate new facilities on the main campus to build on the established foundation of human and physical resources already in place and to encourage interdisciplinary collaboration
- Provide facilities and spaces that will enrich the collaborative learning environment for the on-campus student community and encourage academic, personal, and social development
- Develop a physical environment that will support educational opportunities for an increasingly diverse population
- Retain flexibility that will allow continuing evolution of the campus over time in response to changing demographics, societal needs, technological developments and new external challenges
- Respect and reinforce the Physical Planning Principles and Guidelines to maintain the unique character of the UC Santa Cruz campus

## 2.4 IMPACT SUMMARY

Table 2-1, which is presented at the end of Chapter 2, provides a complete list of all impacts and mitigation measures. For each impact, Table 2-1 reports the significance of the impact before mitigation, applicable mitigation measures, and the level of significance of the impact after the implementation of the mitigation measures.

## 2.5 ALTERNATIVES TO THE PROPOSED PROJECT

The following alternatives were analyzed in detail in the EIR and compared to the proposed 2005 LRDP. The objective of the alternatives analysis is to determine whether an alternative would feasibly attain

some or most of the project objectives, while avoiding or substantially lessening some of the significant effects of the proposed project. The LRDP alternatives include:

- **Alternative 1: Satellite Campus at Former Fort Ord Military Base.** Under this alternative, some of the growth in student population and related faculty and staff growth proposed for the UC Santa Cruz main campus under the 2005 LRDP would instead be accommodated at a new satellite campus on land owned by the University of California at the University of California, Monterey Bay Education, Science and Technology Center (UC MBEST) at Fort Ord.
- **Alternative 2: Reduced Enrollment Growth.** Under this alternative, future development of the campus would be planned to accommodate about 19,500 FTE students and 5,270 employees on campus by 2020-21. This represents an increase of about 5,450 students and approximately 1,190 new employees over the 2003-04 levels. The total on-campus population under this alternative would be approximately 6.7 percent lower than the 2020-21 population proposed under the 2005 LRDP.
- **Alternative 3: Southerly Expansion.** This alternative would aim at accommodating the same population and building space as the 2005 LRDP, but would not include development in the north campus. The northern areas thus would remain essentially undeveloped and the facilities needed to serve the increased campus population would be provided by increased development within the central and lower campus areas.
- **Alternative 4: No Project.** Under the No Project Alternative, the Campus would remain subject to the 1988 LRDP. The Campus would continue to increase enrollment to 15,000 FTE, and then would maintain student enrollment at the 15,000 three-quarter average. Because that enrollment level will likely be attained by 2006-07, there would be little or no increase in enrollment under this alternative above existing conditions. It is possible that the proportion of graduate students would increase under this alternative to about 15 percent of the total student enrollment. Growth in faculty and staff would continue to occur due to a number of factors such as continued expansion of research programs, and faculty and staff population thus could increase by approximately 880 by 2020-21. Consistent with the program “envelope” of the 2005 LRDP, the Campus would be able to add up to 2.7 million gsf of new building space to relieve overcrowding, provide housing to accommodate a larger portion of the campus population, or for research purposes, provided that campus enrollment did not increase above 15,000 students through these actions.

Detailed description and an analysis of potential impacts of each alternative are presented in Chapter 5, *Alternatives* (Volume II). Table 2-2 (which follows Table 2-1) presents a comparison of the environmental impacts of these alternatives to the impacts that would be expected to result from the proposed project.

The No Project Alternative would avoid most of the significant impacts of the proposed 2005 LRDP, many of which are population-related. However, it would not meet the majority of the project objectives, as discussed in detail in Chapter 5 of this EIR (Volume II). If the environmental analysis indicates that the environmentally superior alternative is the No Project Alternative, CEQA Guidelines Section 15126(d)(2) requires that the EIR identify another alternative as environmentally superior.

Of the remaining alternatives, the environmentally superior alternative is Reduced Enrollment Growth Alternative, because it would slightly reduce the project's impact on aesthetics, air quality, impacts related to development on karst, impacts related to potential of erosion, and impacts related to deterioration of recreation facilities. This alternative would meet most of the objectives of the proposed project by providing a physical framework flexible enough to accommodate new initiative, create a dynamic teaching environment and provide increased opportunities for collaboration, research and teaching. However, the reduction of population under this alternative would limit the ability of the Campus to attain the objective of accommodating anticipated enrollment growth through 2020-21, and hinder the University's efforts to fully realize its goal of responding to the increased demand for higher education in California through the 2020-21 planning horizon.

## 2.6 KNOWN AREAS OF CONTROVERSY

This EIR addresses environmental issues associated with the proposed project that are known to the lead agency or were raised by agencies or interested parties during the public and agency NOP review period. These issues include:

- The effect of projected enrollment growth increase on regional housing resources
- Traffic impacts
- Traffic-related noise impacts
- Impacts to biological and hydrological resources from the expansion of campus facilities into the north campus
- Potential effects on scenic views and nighttime lighting
- Availability of water to serve campus growth
- Effects of growth on local public services and utilities

More comprehensive and detailed listings of issues raised during scoping are provided in relevant section on specific issue areas, below. Comment letters received are available for review with the offices of UC Santa Cruz Physical Planning and Construction.

**Table 2-1  
SUMMARY OF IMPACTS AND MITIGATION MEASURES IN THE 2005 LRDP EIR**

LRDP Impact	Level of Significance Prior to Mitigation <sup>1</sup>	LRDP Mitigation Measure	Level of Significance Following Mitigation <sup>1</sup>	
<b>4.1 Aesthetics</b>				
<b>AES-1</b>	Development under the 2005 LRDP would not significantly affect scenic vistas from key vantage points across the campus to the Monterey Bay.	LS	Mitigation not required	NA
<b>AES-2</b>	Development under the 2005 LRDP would not have a substantial effect on uphill scenic vistas that include the campus as viewed from vantage points on the campus and in the city of Santa Cruz.	LS	Mitigation not required	NA
<b>AES-3</b>	Development under the 2005 LRDP could substantially damage scenic resources on campus around the lower campus meadows.	PS	<p><b>AES-3A</b> The UC Santa Cruz Design Advisory Board shall consider effects on scenic resources when reviewing projects under the 2005 LRDP to maintain scenic resources to the extent feasible.</p> <p><b>AES-3B</b> For development in meadow areas, the Campus shall limit the removal of natural vegetation, and cluster development at meadow edges to the extent feasible.</p> <p><b>AES-3C</b> The Campus shall design the alignment and grades of the new Meyer Drive extension to be below the line of sight as viewed from Hagar Drive. If necessary, earthen berms shall be incorporated into the roadway design for purposes of screening the new roadway.</p>	LS
<b>AES-4</b>	Development under the 2005 LRDP could substantially damage the aesthetic quality of the Cowell Ranch Historic District as a scenic resource.	PS	<p><b>AES-4</b> Until the final Cowell Ranch Historic District Management Plan is completed, for projects in the Cowell Ranch Historic District or within 500 feet of its boundaries, the Campus shall take the following measures into account in project design to preserve the historic visual quality of the historic district:</p> <ul style="list-style-type: none"> <li>To the greatest extent feasible, a buffer of at least 200 feet shall be maintained between the boundaries of the historic district and new building development that would be visible against the backdrop of historic buildings from significant campus viewpoints.</li> </ul>	LS

<sup>1</sup>NA: Not Applicable; NI: No impact; LS: Less than significant; PS: Potentially significant; S: Significant; SU: Significant and unavoidable; SP: Speculative

**Table 2-1  
SUMMARY OF IMPACTS AND MITIGATION MEASURES IN THE 2005 LRDP EIR**

LRDP Impact	Level of Significance Prior to Mitigation <sup>1</sup>	LRDP Mitigation Measure	Level of Significance Following Mitigation <sup>1</sup>
<b>AES-4 (cont)</b>		<ul style="list-style-type: none"> <li>• New buildings or structures within 500 feet of the district boundaries shall be subject to review by the Design Advisory Board to ensure that design is consistent with or complementary to the historic aspect of the district and its buildings with respect to scale, massing, architectural style and materials, such that the rural historic visual character of the district is maintained.</li> </ul> <p>Once the Final Cowell Ranch Historic District Management Plan is adopted, all projects within adjacent areas identified in the management plan shall be evaluated for consistency with the visual design guidelines included in the Management Plan.</p>	
<b>AES-5</b>	Development under the 2005 LRDP could substantially degrade the existing visual character of the campus and adjacent areas.	<p style="text-align: center;"><b>PS</b></p> <p><b>AES-5A</b> Prior to design approval of development projects under the 2005 LRDP, the UC Santa Cruz Design Advisory Board shall review project designs for consistency with the valued elements of the visual landscape identified in the 2005 LRDP, and the character of surrounding development so that the visual character and quality of the project area are not substantially degraded.</p> <p><b>AES-5B</b> For projects in redwood forest areas, to the extent feasible, building heights will be designed to be below the height of the surrounding trees.</p> <p><b>AES-5C</b> Campus development shall be designed and construction activities shall be undertaken in a manner that shall preserve healthy and mature trees around new projects, to the greatest extent feasible.</p> <p><b>AES-5D</b> The Campus shall continue its site stewardship program to maintain the wooded visual character of the central and north campus.</p>	LS

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**Table 2-1  
SUMMARY OF IMPACTS AND MITIGATION MEASURES IN THE 2005 LRDP EIR**

LRDP Impact		Level of Significance Prior to Mitigation <sup>1</sup>	LRDP Mitigation Measure	Level of Significance Following Mitigation <sup>1</sup>
<b>AES-5 (cont)</b>			<b>AES-5E</b> The Campus shall ensure that the site plan and design of any development in the Campus Support area on Empire Grade Road adjacent to Cave Gulch: (1) includes a visual undeveloped buffer between the new structures and Empire Grade Road; (2) maintains the natural vegetation in this buffer while adequately managing the fire hazard; and (3) provides an arrangement of buildings and vegetation on the site to screen views of on-site activities from Empire Grade Road and Santa Cruz Waldorf School.	
<b>AES-6</b>	Development under the 2005 LRDP could create new sources of substantial light or glare on campus that could adversely affect daytime or nighttime views in the area.	PS	<b>AES-6A</b> Where there is a potential for reflective glare, as along meadow margins, project design shall provide for the use of nonreflective exterior surfaces, or other design measures to avoid new sources of reflected light.  <b>AES-6B</b> Lighting for new development projects shall be designed to include directional lighting methods shielded to minimize light spillage and minimize atmospheric light pollution. This lighting should be compatible with the visual character of the project site and meet the UC Regents' Green Building Policies.  <b>AES-6C</b> As part of the design review process, the UC Santa Cruz Design Advisory Board shall consider project-related light and glare and the Campus shall require the incorporation of measures into the project design to limit both to the extent allowed by code.  <b>AES-6D</b> The Campus shall require that field lights used for the illumination of sports and recreation fields be turned off after 10 PM to minimize night lighting sources on campus, except when special events are scheduled.  <b>AES-6E</b> As part of the design review process, UC Santa Cruz Design Advisory Board shall review outdoor lighting fixtures for roads, pathways, and parking facilities to ensure that the minimum amount of lighting needed to achieve safe routes is used, and to ensure that the proposed illumination limits adverse effect on nighttime views.	LS

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**Table 2-1  
SUMMARY OF IMPACTS AND MITIGATION MEASURES IN THE 2005 LRDP EIR**

LRDP Impact		Level of Significance Prior to Mitigation <sup>1</sup>	LRDP Mitigation Measure	Level of Significance Following Mitigation <sup>1</sup>
<b>AES-7</b>	Development under the 2005 LRDP, in conjunction with other regional development, would not result in significant cumulative impacts on scenic vistas of the Monterey Bay and the Santa Cruz Mountains as viewed from key vantage points.	LS	Mitigation not required	NA
<b>AES-8</b>	Development under the 2005 LRDP, in conjunction with other regional development, would result in cumulative visual changes, which however, would not substantially degrade the existing visual character or quality of the region.	LS	Mitigation not required	NA
<b>AES-9</b>	Development under the 2005 LRDP, in conjunction with other regional development, could result in increased light and glare but would not adversely affect daytime or nighttime views in the region.	LS	Mitigation not required	NA
<b>4.2 Agricultural Resources</b>				
<b>AG-1</b>	Development under the 2005 LRDP would not convert any lands on campus identified as Important Farmland under the State Farmland Mapping and Monitoring Program to nonagricultural uses	NI	Mitigation not required	NA
<b>AG-2</b>	Development under the 2005 LRDP would not result in changes in the existing environment, which, due to their location or nature, could result in the conversion of farmland to nonagricultural use.	NI	Mitigation not required	NA
<b>AG-3</b>	Growth under the 2005 LRDP, in conjunction with other growth in the region, would not result in the conversion of substantial acreages of Important Farmlands to nonagricultural uses.	LS	Mitigation not required	NA
<b>4.3 Air Quality</b>				
<b>AIR-1</b>	Construction activities under the 2005 LRDP would result in emissions of PM <sub>10</sub> on a short-term basis.	LS	<b>AIR-1</b> The Campus shall apply standard MBUAPCD recommended mitigation measures during construction of new facilities under the 2005 LRDP, as appropriate: <ul style="list-style-type: none"> <li>• Water all active construction areas at least twice daily.</li> </ul>	NA

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**Table 2-1  
SUMMARY OF IMPACTS AND MITIGATION MEASURES IN THE 2005 LRDP EIR**

	<b>LRDP Impact</b>	<b>Level of Significance Prior to Mitigation<sup>1</sup></b>	<b>LRDP Mitigation Measure</b>	<b>Level of Significance Following Mitigation<sup>1</sup></b>
<b>AIR-1 (cont)</b>			<ul style="list-style-type: none"> <li>• Prohibit all grading activities during periods of high wind (over 15 mph).</li> <li>• Apply chemical soil stabilizers on inactive construction areas (disturbed lands within construction projects that are unused for at least four consecutive days).</li> <li>• Apply non-toxic binders (e.g., latex acrylic copolymer), as appropriate, to exposed areas after cut and fill operations and hydroseed area.</li> <li>• Require haul trucks to maintain at least 2 feet of freeboard.</li> <li>• Cover all trucks hauling dirt, sand, or loose materials.</li> <li>• Plant vegetative ground cover in disturbed areas as soon as possible.</li> <li>• Cover inactive storage piles.</li> <li>• Install wheel washers at the entrances to construction sites for all exiting trucks.</li> <li>• Pave all roads on construction sites.</li> <li>• Damp-sweep streets if visible soil material is carried out from the construction site.</li> <li>• Post a publicly visible sign that specifies the telephone number and person to contact regarding dust complaints. This person shall respond to complaints and take corrective action within 48 hours. The phone number of the Monterey Bay Unified Air Pollution Control District shall be visible to ensure compliance with Rule 402.</li> <li>• To the extent feasible, limit the area under construction at any one time.</li> </ul>	

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**Table 2-1  
SUMMARY OF IMPACTS AND MITIGATION MEASURES IN THE 2005 LRDP EIR**

<b>LRDP Impact</b>	<b>Level of Significance Prior to Mitigation<sup>1</sup></b>	<b>LRDP Mitigation Measure</b>	<b>Level of Significance Following Mitigation<sup>1</sup></b>
<b>AIR-2</b> Campus growth under the 2005 LRDP would result in daily operational emissions above the MBUAPCD thresholds, and therefore the proposed project may contribute substantially to a violation of air quality standards or hinder attainment of the regional air quality plan.	S	<b>AIR-2A</b> The Campus shall consider design and construction features that reduce natural gas dependence in the design of each new project, and incorporate those measures that are feasible and that would be effective for the site, such as: <ul style="list-style-type: none"> <li>• Orientation of buildings to optimize solar heating and natural cooling</li> <li>• Use of solar or low-emission water heaters in new buildings</li> <li>• Install best available wall and attic insulation in new buildings</li> </ul> <b>AIR-2B</b> The Campus shall implement LRDP Mitigation TRA-1B to reduce motor vehicle trips. <b>AIR-2C</b> The Campus shall install VOC and NO <sub>x</sub> controls on the new gas turbines to reduce emissions by 90 percent (e.g., Oxidation catalyst and SCR).	SU
<b>AIR-3</b> Traffic generated by development under the 2005 LRDP, in conjunction with traffic associated with other regional growth, would result in an increase in local CO concentrations at study area intersections.	LS	Mitigation not required	NA
<b>AIR-4</b> Growth associated with the 2005 LRDP would conflict with the Air Quality Management Plan.	S	<b>AIR-4A</b> The Campus will work with AMBAG to ensure that campus growth associated with the 2005 LRDP is accounted for in the regional population forecasts. <b>AIR-4B</b> The Campus will work with MBUAPCD to ensure that the campus growth-related emissions are accounted for in the regional emissions inventory and mitigated in future regional air quality planning efforts.	SU

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**Table 2-1  
SUMMARY OF IMPACTS AND MITIGATION MEASURES IN THE 2005 LRDP EIR**

LRDP Impact		Level of Significance Prior to Mitigation <sup>1</sup>	LRDP Mitigation Measure	Level of Significance Following Mitigation <sup>1</sup>
<b>AIR-5</b>	Campus operations under the 2005 LRDP would not result in a substantial human health risk to campus occupants and other populations in the vicinity of the campus from long-term exposures to TACs, but would result in a substantial health risk to campus occupants at certain on-campus locations from short-term exposures to TACs.	S	<b>AIR-5</b> The Campus shall develop and implement an emergency generator maintenance testing schedule consistent with Table 4.3-22.	LS
<b>AIR-6</b>	Construction activities under the 2005 LRDP could potentially result in a substantial health risk to campus occupants at certain on-campus locations from short-term exposures to TACs.	SP	<b>AIR-6</b> The Campus will minimize construction emissions by implementing measures such as those listed below: <ul style="list-style-type: none"> <li>• Require the use of cleaner fuels in construction equipment</li> <li>• Require that construction contractors use electrical equipment where possible</li> <li>• Require construction contractors to minimize the simultaneous operation of multiple pieces equipment at a construction site</li> <li>• Discourage idling of construction equipment and vehicles</li> <li>• Schedule operations of construction equipment to minimize exposure as much as possible</li> </ul>	NA
<b>AIR-7</b>	Regional growth could result in an increase in toxic air contaminants but the implementation of technological improvements would reduce air toxics and associated human health risks.	LS	<b>AIR-7</b> UC Santa Cruz will continue its efforts in the area of TAC emission reduction.	NA
<b>4.4 Biological Resources</b>				
<b>BIO-1</b>	Development on the main campus under the 2005 LRDP could result in a substantial adverse effect, directly and indirectly, on northern maritime chaparral, a sensitive natural community identified by CDFG, and Santa Cruz manzanita, a special-status plant that generally occurs within northern maritime chaparral areas.	PS	<b>BIO-1A</b> The Campus shall avoid removal of large patches (greater than the patch size of 10 acres) of northern maritime chaparral, avoid fragmenting northern maritime chaparral, and shall establish habitat buffers between development and adjacent northern maritime chaparral where feasible. The Campus shall also avoid Santa Cruz manzanita occurrences that are large (greater than patch size of 2 acres) or of high or moderate density, when possible.	LS

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SUMMARY OF IMPACTS AND MITIGATION MEASURES IN THE 2005 LRDP EIR**

LRDP Impact	Level of Significance Prior to Mitigation <sup>1</sup>	LRDP Mitigation Measure	Level of Significance Following Mitigation <sup>1</sup>
<b>BIO-1 (cont)</b>		<p><b>BIO-1B</b></p> <p>The habitat buffer will consist of at least 30 feet of natural vegetation from the edge of paved areas or buildings to the edge of the 100-foot fire buffer around buildings where fuel reduction may occur (see LRDP Mitigation HAZ-10B).</p> <p>Where avoidance of large patches is not feasible, the Campus shall mitigate losses of northern maritime chaparral through the preservation and management of northern maritime chaparral habitat at a ratio of at least 1:1. Losses of Santa Cruz manzanita stands on campus (greater than patch size of 2 acres) shall be mitigated through the preservation and management of other Santa Cruz manzanita stands according to the mitigation ratios in Table 4.4-3. The Campus shall try to preserve the habitat on campus and would implement off-campus preservation only if the required preservation cannot be achieved on campus. Mitigation ratios for Santa Cruz manzanita vary depending on the density of the stand affected and preserved, but are designed to ensure at least 1:1 preservation overall. For off-site preservation, if any is necessary, priority will be given to sites that are closest to UC Santa Cruz in order to protect local genetic diversity. Preservation of northern maritime chaparral and Santa Cruz manzanita can occur at the same site as long as both required mitigation ratios are met.</p> <p>Preservation and management to mitigate the loss of northern maritime chaparral and Santa Cruz manzanita shall be in perpetuity. The goals of management for northern maritime chaparral and Santa Cruz manzanita shall be to reduce the incursion of mixed hardwood forest and non-native invasive species into these stands, encourage regeneration of chaparral species, including Santa Cruz manzanita, and maintain or increase the density of Santa Cruz manzanita.</p>	

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SUMMARY OF IMPACTS AND MITIGATION MEASURES IN THE 2005 LRDP EIR**

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<b>BIO-1 (cont)</b>			Protection of northern maritime chaparral and Santa Cruz manzanita shall occur prior to the loss of these resources due to development. Within one year of protecting a stand, a management and monitoring plan will be prepared that describes quantitative biological goals, management techniques, safety procedures, monitoring protocols, and schedules for that stand. The management plan will be developed in coordination with the Fire Management Plan (see LRDP Mitigation HAZ-10B) and will be consistent with safety requirements. Management plan components shall include monitoring and control of non-native invasive species and monitoring and removal of mixed hardwood forest trees.	
<b>BIO-2</b>	Development on the main campus under the 2005 LRDP could result in a substantial adverse impact to coastal prairie, a sensitive natural community.	PS	<p><b>BIO-2A</b> The Campus shall avoid removal of coastal prairie through redesign of proposed development areas and road alignments where possible. The design of all campus facilities shall include a buffer between development and prairie in order to reduce indirect impacts from edge effects such as increases in noxious weed species. The width of each buffer will depend on the site and the nature of adjacent development. The minimum buffer shall be 30 feet from the edge of paved areas or buildings to the edge of coastal prairie. Landscaped areas are acceptable within the habitat buffer, provided that they are planted with species that are not invasive in coastal prairie (i.e., no non-native grasses) and are not fire prone.</p> <p><b>BIO-2B</b> The Campus shall mitigate for unavoidable losses of coastal prairie by restoring coastal prairie at a 3:1 ratio. Before impacts to coastal prairie occur, a management and monitoring plan, including quantitative success criteria, shall be prepared for the restoration site. Success criteria for the restoration shall include providing equivalent or greater overall (rather than species specific) cover of native perennial bunchgrasses (such as purple needlegrass, California oatgrass, and Pacific panic grass) and native</p>	LS

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**Table 2-1  
SUMMARY OF IMPACTS AND MITIGATION MEASURES IN THE 2005 LRDP EIR**

LRDP Impact	Level of Significance Prior to Mitigation <sup>1</sup>	LRDP Mitigation Measure	Level of Significance Following Mitigation <sup>1</sup>
<b>BIO-2 (cont)</b>		forbs (such as white hyacinth and dwarf brodiaea) as is found in the coastal prairies that will be lost to development. Management of the site shall continue for at least 15 years to protect the coastal prairie management areas from reverting to annual grassland. If coastal prairie restoration does not meet the success criteria after 5 years, restoration shall be remedied (e.g., replanting) or restoration attempted on a new, more suitable site.	
<b>BIO-3</b>	Development under the 2005 LRDP could result in substantial, adverse direct and indirect impacts to jurisdictional wetlands.	<p><b>BIO-3A</b> At the time that a specific development project is proposed, the Campus shall conduct a site reconnaissance to determine whether wetlands are present on the site. If no potential wetlands are found, no further mitigation is necessary.</p> <p><b>BIO-3B</b> If potential wetlands are found, the Campus shall retain a qualified biologist to conduct a delineation of waters of the state and waters of the United States during the environmental review phase of the project to determine the location, extent, and function of wetlands within 200 feet of development footprints.</p> <p><b>BIO-3C</b> Where feasible, direct impacts to jurisdictional wetlands shall be avoided in the design of the project.</p> <p><b>BIO-3D</b> If avoidance of wetlands is not feasible, to compensate for temporary or permanent loss of jurisdictional wetlands, the Campus shall restore or create wetland habitat to ensure no net loss of the extent and function of these communities. Prior to any work that could disturb jurisdictional or other wetland habitat within the project area, the Campus shall obtain the following permits as required:</p> <ul style="list-style-type: none"> <li>• U.S. Army Corps of Engineers – Nationwide or individual permit as required under Clean Water Act Section 404.</li> <li>• Central Coast Regional Water Quality Control Board – Water quality certification or waiver under Clean Water Act Section 401.</li> </ul>	LS

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<b>BIO-3 (cont)</b>			<ul style="list-style-type: none"> <li>California Department of Fish and Game – Streambed Alteration Agreement.</li> </ul> <p>Consultation with these agencies shall govern how the disturbance of wetlands will be mitigated, including the location and extent of wetland restoration or creation.</p>	
<b>BIO-4</b>	Construction of bridge crossings and other improvements under the 2005 LRDP could result in a substantial temporary and permanent adverse impact on riparian vegetation.	PS	<p><b>BIO-4A</b> Campus construction projects shall avoid patches of riparian vegetation greater than 0.1 acre in size or longer than 300 linear stream feet. If avoidance is not feasible, LRDP Mitigation BIO-4B shall be implemented.</p> <p><b>BIO-4B</b> The Campus shall compensate for the loss of patches of riparian vegetation greater than 0.1 acre in size or longer than 300 linear stream feet through onsite and/or offsite restoration and/or enhancement of riparian habitat in order to ensure that no significant loss of riparian habitat functions and values occurs. The size of the area(s) to be restored will be determined based on a 1:1 mitigation ratio. UC Santa Cruz shall retain a qualified restoration ecologist to develop a conceptual restoration and monitoring plan that describes how riparian habitat will be enhanced or restored and monitored over a minimum period of time. UC Santa Cruz shall be responsible for ensuring that the restoration and monitoring plan is implemented. The terms of the restoration and monitoring plan shall be determined in consultation with the CDFG and other permitting agencies.</p> <p><b>BIO-4C</b> If more than 0.2 acre or 600 linear stream feet of riparian vegetation is temporarily disturbed or removed at UC Santa Cruz as a result of proposed storm water drainage improvements or other development under the 2005 LRDP, UC Santa Cruz shall restore riparian vegetation within the project area or in the nearest suitable upstream or downstream reach. Riparian vegetation shall be restored following the construction of each project that has a temporary impact on more than 0.2 acre or 600 linear feet of riparian vegetation. UC Santa Cruz shall compensate</p>	LS

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<b>BIO-4 (cont)</b>			for the loss through onsite restoration and/or enhancement of riparian habitat in order to ensure that no significant loss of riparian habitat functions and values occurs. The size of the area(s) to be restored will be determined based on a 1:1 mitigation ratio. UC Santa Cruz shall retain a qualified restoration ecologist to develop a conceptual restoration and monitoring plan that describes how riparian habitat will be enhanced or restored and monitored over a minimum period of time. UC Santa Cruz shall be responsible for ensuring that the restoration and monitoring plan is implemented. The terms of the restoration and monitoring plan shall be determined in consultation with the CDFG and other permitting agencies.	
<b>BIO-5</b>	Development under the 2005 LRDP would not result in an adverse impact, directly and indirectly, to special-status plant species.	LS	Mitigation not required	NA
<b>BIO-6</b>	Development under the 2005 LRDP has the potential to introduce or cause the spread of noxious weeds, which could reduce the abundance of native plants and sensitive communities.	PS	<p><b>BIO-6</b> To avoid or minimize the introduction or spread of noxious weeds into uninfested areas, UC Santa Cruz shall incorporate the following measures into the project plans and specifications for work on the north campus to be conducted under the 2005 LRDP.</p> <ul style="list-style-type: none"> <li>• Only certified, weed-free materials shall be used for erosion control.</li> <li>• UC Santa Cruz shall identify appropriate best management practices to avoid the dispersal of noxious weeds. The Campus shall then include appropriate practices in construction standards to be implemented during construction in all north campus areas. Typical best management practices include the use of weed-free erosion control materials and revegetation of disturbed areas with seed mixes that include native species and exclude invasive non-natives.</li> </ul>	LS

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<b>BIO-6 (cont)</b>			<ul style="list-style-type: none"> <li>In uninfested areas, topsoil removed during excavation shall be stockpiled and used to refill the trench on site if it is suitable as backfill.</li> </ul>	
<b>BIO-7</b>	Development under the 2005 LRDP could result in a substantial adverse impact on Ohlone tiger beetle populations on the campus from increased bicycle use on trails and obstruction of potential movement corridors by trees planted in the Arboretum.	PS	<p><b>BIO-7A</b> Bicycles will not be allowed on trails in Marshall Field or West Marshall Field that support Ohlone tiger beetles. In addition, during periods of adult beetle activity or larval development (January to June) additional measures to prevent illegal bicycle use shall be implemented.</p> <p>These will include temporary fencing and signs that will be installed and maintained during this period at trail entry points. The information signs will advise all trail users of the need to avoid these areas. UC Santa Cruz Police or Campus Maintenance Staff shall also patrol these areas during this period in order to alert or issue citations to violators and help ensure compliance.</p> <p><b>BIO-7B</b> Any modification of the vegetation composition and/or fencing of Arboretum lands north of the currently enclosed Arboretum will be developed in consultation with the USFWS in order to protect and maintain potential movement corridors for the Ohlone tiger beetle.</p>	LS
<b>BIO-8</b>	Development under the 2005 LRDP would not result in a substantial adverse impact (i.e., loss or degradation of habitat) for cave invertebrates, including the Santa Cruz telemid spider, Dollof Cave spider, Empire Cave pseudoscorpion, or Mackenzie's Cave amphipod.	LS	<b>BIO-8</b> The Campus shall continue to limit visitation of caves on campus, and discourage activities by members of the public that could jeopardize the physical integrity, condition or scientific value of the caves, through appropriate signage and educational literature, Campus Natural Reserve website information, or other appropriate measures.	NA
<b>BIO-9</b>	Development under the 2005 LRDP could result in a substantial adverse effect on breeding or important movement habitat for California red-legged frog; direct impacts to California red-legged frog populations; or indirect impacts on the species from downstream hydrological changes in the Moore Creek watershed.	PS	<p><b>BIO-9</b> UC Santa Cruz will implement the following measures to avoid impacts to the California red-legged frog:</p> <ul style="list-style-type: none"> <li>Initial ground-disturbing activities in the Moore Creek watershed, including grading and vegetation removal, will not occur during the period when CRLF are most likely to be in or near aquatic environments and not dispersing. Therefore, construction in CRLF</li> </ul>	LS

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<b>BIO-9 (cont.)</b>		<p>habitat shall be restricted to the period after May 1 and before October 15.</p> <ul style="list-style-type: none"> <li>• A qualified biologist shall examine the project area 24 hours before project activities begin and during any initial vegetation, woody debris, tree removal, or other initial ground-disturbing activities. If a CRLF is observed at any time before or during project activities, all activities will cease. The Campus will coordinate with the appropriate agencies to develop avoidance measures before commencing project activities.</li> <li>• Initial construction activities, including vegetation removal and grading, shall not occur when it is raining.</li> </ul>		
<b>BIO-10</b>	Development under the 2005 LRDP would not result in a substantial adverse impact associated with the loss of potential habitat or other indirect impacts to the southwestern pond turtle or coast horned lizard.	LS	Mitigation not required	NA
<b>BIO-11</b>	Development under the 2005 LRDP could result in the loss or abandonment of active nests for special-status raptors.	PS	<p><b>BIO-11</b> Prior to construction or site preparation activities, a qualified biologist shall be retained to conduct nest surveys at each site that has appropriate nesting habitat. The survey shall be required for only those projects that will be constructed during the nesting/breeding season of sharp-shinned hawk, golden eagle, northern harrier, long-eared owl, or white-tailed kite (typically February 1 through August 31).</p> <p>The survey area shall include all potential nesting habitat, including mixed evergreen forest, redwood forest, and isolated trees that are within 200 feet of the proposed project grading boundaries. The survey shall be conducted no more than 14 days prior to commencement of construction activities.</p>	LS

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<b>BIO-11 (cont)</b>			If active nests of sharp-shinned hawk, golden eagle, northern harrier, long-eared owl, and white-tailed kite (or other species protected under the Migratory Bird Treaty Act and the California Fish and Game Code) are present in the construction zone or within 200 feet of the construction zone, a temporary fence shall be erected at a distance of 200 feet around the nest site (or less if determined to be appropriate by the biologist according to the species and site conditions). Clearing and construction within the fenced area shall be postponed until juveniles have fledged and there is no evidence of a second nesting attempt as determined by the biologist.	
<b>BIO-12</b>	Development under the 2005 LRDP could potentially result in a substantial adverse impact on western burrowing owl.	PS	<p><b>BIO-12A</b> Prior to any ground disturbance of grassland habitats on the lower campus, a qualified biologist will conduct a preconstruction survey to identify western burrowing owls and/or potential habitat features (e.g., burrows) and to evaluate use by burrowing owls in accordance with current CDFG survey guidelines (CDFG 1995). Surveys will be conducted within the proposed disturbance footprint and a 500-foot radius of the disturbance boundary of each proposed project. For construction activities occurring within the western burrowing owl habitat (whether during breeding or non-breeding seasons), surveys will be conducted within 30 days prior to construction. The surveys will document whether burrowing owls are nesting on or directly adjacent to disturbance areas. Survey results will be valid only for the season during which the survey is conducted. If western burrowing owls are found during the breeding or nonbreeding season, LRDP Mitigation BIO-12B will be implemented.</p> <p><b>BIO-12B</b> If burrowing owls are found, the Campus will avoid all burrowing owl nest sites to the extent feasible. Avoidance will include establishment of a non-disturbance buffer zone of at least 250 feet around each nest site during the</p>	LS

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<b>BIO-12 (cont)</b>		<p>breeding season. If burrowing owls are found outside the breeding season (September 1–January 31), avoidance will include the establishment of at least a 160-foot non-disturbance buffer zone around each burrow being used. In both cases, highly visible temporary construction fencing will delineate the buffer zone.</p> <p>If burrowing owl nest sites cannot be avoided, the Campus will conduct passive relocation by installing one-way doors in suitable burrow entrances that are used or may be used by the owls. This measure is described in detail below.</p> <p>In order to displace burrowing owls without destroying eggs, young, or adults, one-way doors will be installed on owl burrows before February 1 prior to disturbance, and each burrow will be monitored following CDFG’s protocol (CDFG 1995). Suitable artificial burrows will be created nearby according to the conservation measures established for this species. The protocol includes monitoring the burrow for a 48-hour period after the one-way doors are installed. The doors will be checked every 24 hours following installation to determine whether they are still intact. If the one-way door is still correctly installed after a continuous 48-hour period (i.e., no animals have dug up the door and rendered it useless), then the one-way door will be removed and the burrows will be excavated using hand tools and plastic tubing to maintain an escape route for any animals still inside the burrow.</p>	
<b>BIO-13</b>	Development under the 2005 LRDP could result in a substantial adverse impact associated with the disturbance of roosting sites for special-status bats.	<b>BIO-13A</b> If tree removal or grading activity commences on a project site in the north campus during the breeding season of native bat species (April 1 through August 31), a field survey shall be conducted by a qualified biologist to determine whether active roosts of special-status bats (pallid bat, Pacific Townsend’s big-eared bat, western red bat, long-eared myotis, fringed myotis, long-legged	LS

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<b>BIO-13 (cont)</b>			<p>myotis, yuma myotis, or greater western mastiff bat) are present on the project site or in areas containing suitable roosting habitat within 50 feet of the project site.</p> <p>Field surveys shall be conducted in late April or early May in the season before construction begins, when bats are establishing maternity roosts but before pregnant females give birth. If no roosting bats are found, no further mitigation would be required.</p> <p><b>BIO-13B</b> If roosting bats are found, disturbance of the maternity roosts shall be avoided by halting construction until either (1) the end of the breeding season or, (2) a qualified biologist removes and relocates the roosting bats in accordance with CDFG requirements.</p>	
<b>BIO-14</b>	Development under the 2005 LRDP could result in a substantial adverse impact associated with the loss of potential San Francisco dusky-footed woodrat nests.	PS	<p><b>BIO-14</b> A pre-construction/grading survey of all suitable San Francisco dusky-footed woodrat habitat within 100 feet of the proposed grading footprint shall be conducted by a qualified biologist to detect any woodrat nests.</p> <p>The survey shall be conducted no more than 14 days prior to commencement of construction activities. If active nests (stick houses) are identified within the construction zone or within 100 feet of the construction zone, a fence shall be erected around the nest site with a 100-foot minimum buffer from construction activities. At the discretion of the biologist, clearing and construction within the fenced area would be postponed or halted until juveniles have left the nest. The biologist shall serve as a construction monitor during those periods when construction activities will occur near active nest areas to ensure that no inadvertent impacts on these nests will occur. If any woodrat is observed within the grading footprint outside of the breeding period, individuals shall be trapped and relocated to a suitable location in proximity to the project site by a qualified biologist in accordance with CDFG requirements, and the nest dismantled so it cannot be reoccupied.</p>	LS

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<b>BIO-15</b>	Development under the 2005 LRDP could interfere substantially with the movement of wildlife species or with established native resident or migratory wildlife corridors.	PS	<b>BIO-15</b> New fencing planned for installation around Arboretum plantings between Moore Creek and the Great Meadow shall be constructed to allow for the movement of mammals across or around the barrier.	LS
<b>BIO-16</b>	Development under the 2005 LRDP would not conflict with the approved HCP for California red-legged frog and Ohlone tiger beetle on campus.	LS	Mitigation not required	NA
<b>BIO-17</b>	Campus development under the 2005 LRDP, in conjunction with other regional development in northern Santa Cruz County, would not result in a substantial adverse cumulative impact on sensitive natural communities.	LS	Mitigation not required	NA
<b>BIO-18</b>	Development under the 2005 LRDP, in conjunction with other regional development, would not result in a substantial adverse cumulative impact on other special-status wildlife species or wildlife movement.	LS	Mitigation not required	NA
<b>BIO-19</b>	Campus population growth under the 2005 LRDP, in conjunction with other regional population growth, would result in a substantial adverse cumulative impact to Ohlone tiger beetle populations on campus from increased bicycle traffic on trails suitable for this species.	PS	<b>BIO-19</b> The Campus shall implement LRDP Mitigations BIO-7A and BIO-7B.	LS
<b>4.5 Cultural Resources</b>				
<b>CULT-1</b>	Implementation of the 2005 LRDP could damage or destroy an archaeological resource as the result of grading, excavation, ground disturbance or other project development.	PS	<b>CULT-1A</b> As early as possible in the project planning process, the Campus shall define the project's area of potential effects for archaeological resources. The Campus shall determine the potential for the project to result in cultural resource impacts, based on the extent of ground disturbance and site modifications anticipated for the proposed project. The Campus shall also review confidential resource records to determine whether complete intensive archaeological survey has been performed on the site and whether any previously recorded cultural resources are present.	LS

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<b>CULT-1 (cont)</b>			<p><b>CULT-1B</b> Where native soils will be disturbed, the Campus shall provide and shall require contractor crews to attend an informal training session prior to the start of earth moving, regarding how to recognize archaeological sites and artifacts. In addition, campus employees whose work routinely involves disturbing the soil shall be informed how to recognize evidence of potential archaeological sites and artifacts. Prior to disturbing the soil, contractors shall be notified that they are required to watch for potential archaeological sites and artifacts and to notify the campus if any are found. In the event of a find, the Campus shall implement LRDP Mitigation CULT-1G, below.</p> <p><b>CULT-1C</b> For project sites that have not been subject to prior complete intensive archaeological survey, the Campus shall ensure that a complete intensive surface survey is conducted by a qualified archaeologist during project planning and design and prior to soil disturbing activities. If an archaeological deposit is discovered, the archaeologist will prepare a site record and file it with the California Historical Resource Information System. In the event of a find within the area of potential effects, the Campus shall consult with a qualified archaeologist to design and conduct an archaeological subsurface investigation and/or a construction monitoring plan of the project site to ascertain the extent of the deposit relative to the project's area of potential effects, to ensure that impacts to potential buried resources are avoided.</p> <p><b>CULT-1D</b> If it is determined that the resource extends into the project's area of potential effects, the Campus shall ensure that the resource is evaluated by a qualified archaeologist, who will determine whether it qualifies as a historical</p>	

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CULT-1 (cont)		<p>resource or a unique archaeological resource under the criteria of CEQA Guidelines §15064.5. This evaluation may require additional research, including subsurface testing. If the resource does not qualify, or if no resource is present within the project APE, this will be reported in the environmental document and no further mitigation will be required unless there is a discovery during construction.</p> <p><b>CULT-1E</b> If a resource within the project’s area of potential effects is determined to qualify as an historical resource or a unique archaeological resource (as defined by CEQA), the Campus shall consult with the qualified archaeologist to consider means of avoiding or reducing ground disturbance within the site boundaries, including minor modifications of building footprint, landscape modification, the placement of protective fill, or other means that will permit avoidance or substantial preservation in place of the resource.</p> <p><b>CULT-1F</b> If avoidance or substantial preservation in place is not possible for an archaeological site that has been determined to meet CEQA significance criteria, the Campus shall retain a qualified archaeologist who, in consultation with the Campus, shall prepare a research design, and plan and conduct archaeological data recovery and monitoring that will capture those categories of data for which the site is significant, prior to or during development of the site. The Campus shall also ensure that appropriate technical analyses are performed, and a full written report prepared and filed with the California Historical Resources Information System, and also shall provide for the permanent curation of recovered materials.</p>	

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<b>CULT-1 (cont)</b>			<p><b>CULT-1G</b> If an archaeological resource is discovered during construction (whether or not an archaeologist is present), all soil disturbing work within 100 feet of the find shall cease. The Campus shall contact a qualified archaeologist to provide and implement a plan for survey, subsurface investigation as needed to define the deposit, and assessment of the remainder of the site within the project area to determine whether the resource is significant and would be affected by the project. LRDP Mitigation CULT-1F shall also be implemented.</p> <p><b>CULT 1H</b> If, in the opinion of the qualified archaeologist and in light of the data available, the significance of the site is such that data recovery cannot capture the values that qualify the site for inclusion on the CRHR, the campus shall reconsider project plans in light of the high value of the resource, and implement more substantial modifications to the proposed project that would allow the site to be preserved intact, such as project redesign, placement of fill, or project relocation or abandonment. If no such measures are feasible, the Campus shall implement LRDP Mitigation CULT-3A</p>	
<b>CULT-2</b>	Implementation of the proposed 2005 LRDP could damage or destroy a historic building or structure as the result of alteration of the building or of the site, or other project development.	PS	<p><b>CULT-2A</b> For projects within Cowell Ranch Historic District overlay, the Campus shall implement LRDP Mitigations AES-4A and AES-4B.</p> <p><b>CULT-2B</b> As early as possible in the project planning process, the Campus shall define the project's area of potential effect for historic structures. The Campus shall determine the potential for the project to result in impacts to or alteration of historic structures, based on the extent of site and building modifications anticipated for the proposed project.</p> <p><b>CULT-2C</b> Before altering or otherwise affecting a building or structure 50 years old or older that has not been evaluated previously, the Campus shall retain a qualified architectural historian to record it at professional</p>	<ul style="list-style-type: none"> <li>• SU</li> </ul>

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CULT-2 (cont)		<p>standards, and assess its significance under CEQA Guidelines Section 15064.5. The evaluation process shall include the development of appropriate historical background research as context for the assessment of the significance of the structure in the history of the University system, the campus, and the region. For historic buildings, structures or features that do not meet the CEQA criteria for historical resource, no further mitigation is required and the impact is less than significant.</p> <p><b>CULT-2D</b> For a building or structure that qualifies for listing on the CRHR, the Campus shall consult with the architectural historian to consider measures that would enable the project to avoid direct or indirect impacts to the building or structure. These could include preserving a building on the margin of the project site, using it “as is,” or other measures that would not alter the building.</p> <p><b>CULT-2E</b> If the project cannot avoid modifications to a significant building or structure, the Campus shall ensure that documentation and treatment shall be carried out by a qualified architectural historian, as described below:</p> <ul style="list-style-type: none"> <li>• If the building or structure can be preserved on site, but remodeling, renovation or other alterations are required, this work shall be conducted in compliance with the “Secretary of the Interior’s Standards for the Treatment of Historic Properties with Guidelines for Preserving, Rehabilitating, Restoring, and Reconstructing Historic Buildings” (Weeks and Grimmer 1995).</li> <li>• If a significant historic building or structure is proposed for major alteration or renovation, or to be moved and/or demolished, the campus shall ensure that a qualified architectural historian thoroughly documents the building and associated landscaping and setting. Documentation shall include still and</li> </ul>	

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CULT-2 (cont)		<p>video photography and a written documentary record of the building to the standards of the Historic American Building Survey (HABS) or Historic American Engineering Record (HAER), including accurate scaled mapping, architectural descriptions, and scaled architectural plans, if available. A copy of the record shall be deposited in the McHenry Library Special Collections, and with the California Historical Resources Information System. The record shall be accompanied by a report containing site-specific history and appropriate contextual information. This information shall be gathered through site specific and comparative archival research, and oral history collection as appropriate.</p> <p>If preservation and reuse at the site are not feasible, the historical building shall be documented as described in item (ii) and, when physically and financially feasible, be moved and preserved or reused.</p> <p><b>CULT-2F</b> If, in the opinion of the qualified architectural historian, the nature and significance of the building is such that its demolition or destruction cannot be fully mitigated through documentation, the Campus shall reconsider project plans in light of the high value of the resource, and implement more substantial modifications to the proposed project that would allow the structure to be preserved intact. These could include project redesign, relocation or abandonment. If no such measures are feasible, the Campus shall implement LRDP Mitigation CULT-3B.</p>	

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SUMMARY OF IMPACTS AND MITIGATION MEASURES IN THE 2005 LRDP EIR**

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<b>CULT-3</b>	Implementation of the LRDP could cause a substantial adverse change in the significance of a historical resource or unique archaeological resource, as defined in CEQA guidelines 15064.5, and the values that contribute to the significance of the resource cannot be preserved through documentation and data recovery.	S	<p><b>CULT-3A</b> If a significant archaeological resource cannot be preserved intact, before the property is damaged or destroyed, the Campus shall ensure that the resource is appropriately documented by implementing a program of research-directed data recovery, consistent with LRDP Mitigation CULT-1F.</p> <p><b>CULT-3B</b> If a significant historic resource or unique archaeological resource cannot be preserved intact, before the property is damaged or destroyed the Campus shall ensure that the important information represented by the resource is preserved, by implementing a program of documentation as described in LRDP Mitigation CULT-2D.</p>	SU
<b>CULT-4</b>	Implementation of the proposed 2005 LRDP could disturb human remains, including those interred outside of formal cemeteries.	PS	<p><b>CULT-4A</b> The Campus shall implement LRDP Mitigations CULT-1A through CULT-1H to minimize the potential for disturbance or destruction of human remains in an archaeological context and to preserve them in place, if feasible.</p> <p><b>CULT-4B</b> The Campus shall provide a representative of the local Native American community an opportunity to monitor any excavation (including archaeological excavation) within the boundaries of a known Native American archaeological site.</p> <p><b>CULT-4C</b> In the event of a discovery on campus of human bone, suspected human bone, or a burial, the Campus shall ensure that all excavation in the vicinity halts immediately and the area of the find is protected until a qualified archaeologist determines whether the bone is human. If the qualified archaeologist determines the bone is human, or if a qualified archaeologist is not present, the Campus will notify the Santa Cruz County Coroner of the find and protect the find without further disturbance until the Coroner has made a finding relative to PRC 5097 procedures. If it is determined that the find is of Native American origin, the Campus will comply with the provisions of PRC § 5097.98 regarding identification and</p>	LS

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<b>CULT-4 (cont)</b>			<p>involvement of the Native American Most Likely Descendant (MLD).</p> <p><b>CULT-4D</b> If human remains cannot be left in place, the Campus shall ensure that the qualified archaeologist and the MLD are provided an opportunity to confer on archaeological treatment of human remains, and that appropriate studies, as identified through this consultation, are carried out. The Campus shall provide results of all such for local Native American involvement in any interpretative reporting. As required by the provisions of the California Native American Graves Protection and Repatriation Act (NAGPRA), the Campus shall ensure that human remains and associated artifacts recovered from campus projects on state lands are repatriated to the appropriate local tribal group if requested, provided that the appropriate group can be identified through California NAGPRA procedures.</p>	
<b>CULT-5</b>	Development under the 2005 LRDP has the potential to disturb or destroy unique paleontological resources.	PS	<p><b>CULT-5A</b> During project planning, the Project Manager shall consult the most recent Campus Soils and Geology map to determine whether the proposed project is underlain by a formation that is known to be sensitive for paleontological resources.</p> <p><b>CULT-5B</b> If the project site is underlain by paleontologically sensitive formations, the Campus shall retain a qualified paleontologist to determine, through assessment of results of geotechnical investigations or site inspection, whether proposed excavation or grading has the potential to encounter the members of sensitive formations that are fossiliferous, and if so, to develop a paleontological monitoring and data recovery plan and implement it during the construction period as appropriate. In addition, the paleontologist shall conduct a construction crew education session regarding paleontological potential and significance, and of stop-work provisions in the event of a discovery.</p>	LS

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<b>CULT-5 (cont)</b>			<p><b>CULT-5C</b> In the event of a discovery of a paleontological resource on campus, work within 50 feet of the find shall halt until a qualified paleontologist has examined and assessed the find and, if the resource is determined to be a unique paleontological resource, the resource is recovered. The Campus shall ensure that all finds are adequately documented, analyzed, and curated at an appropriate institution.</p> <p><b>CULT-5D</b> In the event that a proposed project would result in impacts to a unique paleontological resource, the project planning team shall work together to reduce impacts to the find through design and construction modifications, to the extent feasible.</p>	
<b>CULT-6</b>	Increased population on campus as a result of implementation of the 2005 LRDP could result in damage to the scientific value of unique geologic resources.	PS	<b>CULT-6</b> The Campus shall implement LRDP Mitigation BIO-8.	LS
<b>CULT-7</b>	Development under the 2005 LRDP could contribute to cumulative damage to and loss of the resource base of unique archaeological resources, historical resources (including archaeological sites and historic buildings and structures) and human remains in the Santa Cruz west side.	PS	<b>CULT-7</b> The Campus shall implement LRDP Mitigations CULT-1 through CULT-4.	LS
<b>CULT-8</b>	Development under the 2005 LRDP would not contribute to cumulative damage to and loss of the resource base of unique paleontological resources in Santa Cruz County.	LS	Mitigation not required	NA
<b>CULT-9</b>	Development under the 2005 LRDP would not contribute to cumulative damage to and loss of the resource base of unique geological resources in Santa Cruz County.	LS	Mitigation not required	NA

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<b>4.6 Geology, Soils, and Seismicity</b>				
<b>GEO-1</b>	Development under the 2005 LRDP could occur on a geologic unit or soil that would become unstable as a result of the project and could result in on- or off-site landslides, lateral spreading, or liquefaction, creating potential risks to life or property.	PS	<b>GEO-1</b> Where existing information is not adequate, detailed geotechnical studies shall be performed for areas that will support buildings or foundations. Recommendations of the geotechnical investigations will be incorporated into project design.	LS
<b>GEO-2</b>	Development under the 2005 LRDP could result in construction of campus facilities on expansive soil, but this would not create potential risks to life and property.	PS	<b>GEO-2</b> The Campus shall implement LRDP Mitigation GEO-1.	LS
<b>GEO-3</b>	Development under the 2005 LRDP would not result in substantial erosion of soils as a result of construction, including tree removal, and increased traffic.	LS	Mitigation not required	NA
<b>GEO-4</b>	Development under the 2005 LRDP could result in construction of facilities on sites underlain by karst features, which could lead to settling or collapse beneath the structures.	PS	<b>GEO-4</b> The Campus shall implement LRDP Mitigation GEO-1.	LS
<b>GEO-5</b>	Development under the 2005 LRDP would not expose people and structures on campus to potentially adverse effects associated with seismic ground shaking or seismic-related ground failure.	LS	Mitigation not required	NA
<b>GEO-6</b>	Cumulative development, including the development on campus under the 2005 LRDP, could expose people or structures to potential adverse effects involving seismic ground shaking.	LS	Mitigation not required	NA
<b>4.7 Hazards and Hazardous Materials</b>				
<b>HAZ-1</b>	Implementation of the 2005 LRDP would increase routine use of hazardous chemicals, radioactive materials, and/or biohazardous materials on campus by UC Santa Cruz laboratories and departments and in maintenance and support operations, which would not create significant hazards to the public or the environment.	LS	Mitigation not required	NA

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<b>HAZ-2</b>	Development under the 2005 LRDP could increase routine generation of hazardous, radioactive, or biohazardous wastes on campus by UC Santa Cruz laboratories and departments and in maintenance and support operations, which would not create significant hazards to the public or the environment because hazardous waste would continue to be comprehensively managed by UC Santa Cruz pursuant to state and federal law and campus policies and procedures.	LS	<b>HAZ-2</b> The Campus will enhance its hazardous waste minimization program by (1) monitoring chemical purchases and use; and (2) maintaining a hazardous waste website to provide campus waste generators with the latest information on hazardous waste requirements; recycling, treatment, and disposal options; and waste minimization techniques.	NA
<b>HAZ-3</b>	Development under the proposed 2005 LRDP would increase the routine transport of hazardous materials to and from the UC Santa Cruz campus, which would not create significant hazards to the public or the environment.	LS	Mitigation not required	NA
<b>HAZ-4</b>	Development under the 2005 LRDP would not create significant hazards to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment.	LS	Mitigation not required	NA
<b>HAZ-5</b>	Development under the proposed 2005 LRDP would result in increased handling of hazardous or acutely hazardous materials within ¼ mile of an existing or proposed school, which would not create a significant hazard for those attending the school.	LS	Mitigation not required	NA
<b>HAZ-6</b>	Construction and demolition activities under the proposed 2005 LRDP would not expose construction workers and campus occupants to contaminated soil or groundwater.	LS	Mitigation not required	NA
<b>HAZ-7</b>	Demolition or renovation of buildings under the proposed 2005 LRDP could potentially expose construction workers and campus occupants to contaminated building materials.	LS	<b>HAZ-7</b> The Campus shall survey buildings for potential contamination before any demolition or renovation work is performed. If contamination is discovered, appropriate remediation will be completed.	NA

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<b>HAZ-8</b>	Hazardous materials use on campus under the proposed 2005 LRDP would not exceed emergency response capabilities.	LS	Mitigation not required	NA
<b>HAZ-9</b>	Campus development under the 2005 LRDP could potentially interfere physically with the campus's Emergency Operations Plan (EOP).	PS	<p><b>HAZ-9A</b> The Campus shall continue to include the following requirements in its Campus Standards and implement them under the 2005 LRDP:</p> <ul style="list-style-type: none"> <li>• Construction work shall be conducted so as to ensure the least possible obstruction to traffic.</li> <li>• Contractors shall notify the University's Representative at least two weeks before any road closure.</li> <li>• When paths, lanes, or roadways are blocked, detour signs must be installed to clearly designate an alternate route. Fire hydrants shall be kept accessible to fire fighting equipment at all times. To ensure adequate access for emergency vehicles when construction projects would result in temporary lane or roadway closures, Physical Plant and Physical Planning and Construction shall continue to require that construction and maintenance project managers notify campus police and fire departments and the campus dispatchers of the closures and alternative travel routes.</li> </ul> <p><b>HAZ-9B</b> The Campus shall test the effectiveness provisions of the EOP annually, and update as necessary.</p> <p><b>HAZ-9C</b> Before the beginning of the construction of the north campus loop road, the Campus shall expand existing main campus EOP to cover new development areas. In addition, the Campus will develop a site-specific EOP for the facility at 2300 Delaware Avenue.</p> <p><b>HAZ-9D</b> Any new development project on the north campus shall be provided with a secondary emergency egress route prior to occupancy of the development.</p>	LS

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<b>HAZ-10</b>	Campus development under the proposed 2005 LRDP would result in increased risk from wildland fires.	<p><b>HAZ-10A</b> UC Santa Cruz Fire Department will continue to conduct annual inspections of all residential and laboratory buildings and biennial inspections of all other buildings.</p> <p><b>HAZ-10B</b> Prior to beginning north campus construction, UC Santa Cruz will develop a new Fire Management Plan aimed at preventing wildland fires in the north campus. This Fire Management Plan will include provisions governing vegetation management and will specify pruning guidelines and provide a minimum of 30 feet of clearance between existing vegetation and buildings. The Fire Management Plan will include a rigorous inspection schedule of the interior and exterior of buildings with particular focus on ensuring that surrounding vegetation does not endanger buildings. The Plan will ensure that fire hydrants are adequately spaced and accessible and that fire roads are maintained and accessible. The Plan will also address limiting the risk of fires in the undeveloped regions on the campus.</p> <p><b>HAZ-10C</b> The Campus shall provide wildland fire prevention signage in the north and upper campus areas in conjunction with the new development.</p> <p><b>HAZ-10D</b> Building component protection as prescribed in the International Uniform Wildland Interface Code (UWIC) shall be required where appropriate as determined by the Campus Fire Marshal. All building construction shall comply with the minimum requirements adopted by the State Fire Marshal's Office.</p>	LS
<b>HAZ-11</b>	Implementation of the proposed 2005 LRDP would increase use of hazardous materials by non-UC Santa Cruz entities on campus, which could create hazards to the public or the environment under routine and upset conditions.	<b>HAZ-11</b> For projects proposed by non-UC Santa Cruz entities on campus that involve laboratory space, non-UC Santa Cruz entities shall be required, through contracts and agreements, to implement programs and controls that provide the same level of protection required of campus laboratories and departments. The following project-specific mitigation measures would be implemented for non-UC Santa Cruz tenants:	LS

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HAZ-11 (cont)		<ul style="list-style-type: none"> <li>• Non-UC Santa Cruz entities shall submit the qualifications of designated laboratory directors to UC Santa Cruz EH&amp;S prior to commencing laboratory operations. Such documentation shall be in the form of educational and professional qualifications/experience.</li> <li>• Non-UC entities shall submit certification of compliance with NIH biosafety principles to the UC Santa Cruz EH&amp;S prior to commencing on-site research. Non-UC entities shall submit copies of completed medical waste management plans, biosafety management plans, inventories of infectious or genetically modified agents, applicable permits and updates.</li> <li>• If hazardous material quantities are proposed to be increased above applicable threshold quantities as defined in California Code of Regulations, Title 19, Division 2, Chapter 4.5, non-UC entities shall implement a Risk Management Plan/California Accidental Release Prevention Plan (RMP/CalARP), which discusses the handling and storage of acutely hazardous materials on site. The RMP/CalARP shall be approved by the CUPA and filed with the UC Santa Cruz EH&amp;S prior to commencing proposed operations.</li> <li>• Non-UC entities shall submit certification to the UC Santa Cruz EH&amp;S to verify that applicable requirements for handling and disposal of hazardous wastes have been met prior to commencing on-site research. Non-UC entities shall submit copies of management plans for handling and disposal of hazardous wastes, and written verification of contracts with licensed waste disposal firms.</li> </ul>	

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<b>HAZ-11 (cont)</b>			<ul style="list-style-type: none"> <li>Non-UC entities shall provide to the UC Santa Cruz EH&amp;S copies of all required environmental reports to local, state, and federal environmental and safety regulators.</li> </ul>	
<b>HAZ-12</b>	Development under the proposed 2005 LRDP, in conjunction with other regional development, would result in increased use and transport of hazardous materials, but the increase would not result in a significant cumulative hazard or hazardous materials impact. It is unlikely that there will be a cumulative increase in risk of hazardous materials release, risk to existing and proposed schools from handling of hazardous materials, or risk of wildland fires.	LS	Mitigation not required	NA
<b>4.8 Hydrology and Water Quality</b>				
<b>HYD-1</b>	Campus development under the 2005 LRDP would not result in wastewater that would violate wastewater discharge requirements.	LS	Mitigation not required	NA
<b>HYD-2</b>	Campus development under the 2005 LRDP could result in storm water runoff during construction, which could substantially degrade water quality.	PS	<p><b>HYD-2A</b> For all construction projects less than one acre in area, the Campus shall continue to require the use of construction site controls and best management practices in compliance with the campus draft Storm Water Management Program, the campus Erosion Control Standards, and the Site Requirements for Erosion Control and Drainage in the Campus Standards Handbook.</p> <p><b>HYD-2B</b> No grading shall be conducted on hillsides (sites with slopes greater than 10 percent) during the wet season (October 1 through May 31) unless controls that prevent sediment from leaving the site are implemented. Erosion control measures, such as erosion control blankets, seeding or other stabilizing mechanisms shall be applied to graded hillside prior to predicted storm events.</p>	LS

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<b>HYD-3</b>	Campus development under the 2005 LRDP would alter drainage patterns in the project area, and increase the rate or amount of surface runoff, which could result in substantial siltation or erosion on or off site, and increase the amount of urban pollutants in storm water runoff, which could affect water quality.	S	<p><b>HYD-3A</b> The Campus shall install additional signs and expand the public education program to inform and educate the campus population about the importance of staying on paved roads and approved paths to prevent vegetation disturbance and soil erosion.</p> <p><b>HYD-3B</b> The Campus shall implement control measures to reduce erosion along new and existing unpaved fire roads, including but not limited to water bars to redirect flow off the road and flow dispersion of runoff from roads.</p> <p><b>HYD-3C</b> Each new capital project proposed under the 2005 LRDP that creates new impervious surface shall include design measures to ensure that post-development peak flows from 2-, 5- and 10-year storms do not exceed the 2-, 5-, and 10-year pre-development peak flows and that post-development peak flows from a 25-year storm do not exceed the pre-development peak flow from a 10-year storm. Each new capital project shall also include design measures to avoid or minimize the increase in the volume of runoff discharged from the site to the maximum extent feasible.</p> <p><b>HYD-3D</b> The Campus shall incorporate measures into project designs under the 2005 LRDP that maximize infiltration of runoff. Infiltration shall be achieved preferably near the area where new runoff is generated.</p>	SU
<b>HYD-4</b>	Campus development under the 2005 LRDP could alter drainage patterns in the project area and would increase the rate or amount of surface runoff, which could exceed the capacity of storm water drainage systems, resulting in flooding on or off site.	LS	Mitigation not required	NA
<b>HYD-5</b>	Campus development under the 2005 LRDP would not deplete groundwater supplies through pumping of groundwater for beneficial use, interfere with groundwater recharge such that there would be a net deficit in aquifer volume or a lowering of the local	LS	<p><b>HYD-5A</b> The Campus shall implement LRDP Mitigation HYD-3D.</p> <p><b>HYD-5B</b> For projects involving construction on karst, if: (a) groundwater is encountered beneath the building site during the geotechnical investigation, and (b) the proposed foundation type would require pressure grouting, the</p>	LS

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<b>HYD-5 (cont)</b>	groundwater table level, or affect groundwater quality.		<p>Campus will follow the procedures outlined below:</p> <ul style="list-style-type: none"> <li>• Perform a dye tracing study to determine if there is a potential for pressure grouting to affect water quality in springs and seeps around the UC Santa Cruz campus. If a potential impact is indicated, alternative building foundation plans will be considered.</li> <li>• As an alternative, the Campus may conduct a preliminary hydrogeological study to evaluate whether the groundwater zone encountered during the geotechnical investigation is hydraulically connected to the karst aquifer. If the hydrogeological study indicates that the groundwater zone is hydraulically independent of the karst aquifer, such that there is no potential for grout injected during construction to affect karst water quality, a dye tracing study need not be performed. If results of the hydrogeological study indicate hydraulic connectivity between the groundwater encountered beneath the site and the karst aquifer, the Campus shall conduct a dye tracing study as described above.</li> </ul> <p><b>HYD-5C</b> If the existing or a new groundwater well is used the Campus shall perform monitoring of water levels within that well and any adjacent wells, and monitoring of those springs in the campus vicinity shown to be connected to the well with a dye tracing study or other applicable testing method for the duration of groundwater pumping to ascertain whether there is any long-term decline in water levels or spring discharge.</p> <p>If monitoring of water levels and springs indicates that campus use of groundwater is contributing to a net deficit in aquifer volume, as indicated by a substantial decrease in average water levels in any monitored wells or a</p>	

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<b>HYD-5 (cont)</b>			substantial reduction of flows in monitored springs, the Campus will terminate or reduce its use of groundwater from the aquifer. The average water levels and flows in springs will be defined through a statistical analysis of historic data, with consideration of associated seasonal rainfall and seasonal variations in spring discharge flow rates.	
<b>HYD-6</b>	Implementation of the 2005 LRDP would alter drainage patterns on the campus, increase the rate and amount of surface runoff, potentially affect the quality of runoff, and therefore could cause flooding and water quality impacts in caves on or off site.	PS	<b>HYD-6</b> The Campus shall implement LRDP Mitigations HYD-3C and 3D.	LS
<b>HYD-7</b>	Campus development under the 2005 LRDP, in conjunction with other development in the region, would increase impervious surface coverage in the study area watersheds and increase storm water runoff, but would not result in substantial sources of runoff in off-campus watersheds, and therefore would not have a substantial adverse effect on receiving water quality.	LS	Mitigation not required	NA
<b>HYD-8</b>	Groundwater extraction by the Campus during drought periods would not contribute to a net deficit in the regional aquifer volume or a lowering of the local groundwater table.	LS	Mitigation not required	NA
<b>4.9 Land Use and Planning</b>				
<b>LU-1</b>	Development under the 2005 LRDP would not conflict with an applicable land use plan, policy, or regulation of an agency with jurisdiction over the project that was adopted for the purpose of avoiding or mitigating an environmental effect.	LS	Mitigation not required	NA
<b>LU-2</b>	Campus growth under the 2005 LRDP would not result in the development of land uses that are substantially incompatible with existing adjacent or planned land uses within the campus or at its periphery.	LS	Mitigation not required	NA

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<b>LU-3</b>	Development under the 2005 LRDP would not conflict with any applicable Habitat Conservation Plan or Natural Community Conservation Plan, either directly or indirectly.	LS	Mitigation not required	NA
<b>LU-4</b>	Development under the 2005 LRDP, together with other regional growth, would not result in the development of land uses that are substantially incompatible with existing adjacent land uses or planned uses in the northwestern portion of the city of Santa Cruz.	LS	Mitigation not required	NA
<b>4.10 Noise</b>				
<b>NOIS-1</b>	Construction of campus facilities pursuant to the 2005 LRDP could expose nearby sensitive receptors to excessive airborne noise but not to excessive groundborne vibration or groundborne noise.	PS	<p><b>NOIS-1</b> Prior to initiation of construction of a specific development project, the Campus shall approve a construction noise mitigation program that shall be implemented for each construction project. This shall include but not be limited to the following:</p> <ul style="list-style-type: none"> <li>• Construction equipment used on campus is properly maintained and has been outfitted with feasible noise-reduction devices to minimize construction-generated noise.</li> <li>• Laydown and construction vehicle staging areas are located at least 100 feet away from noise-sensitive land uses as feasible.</li> <li>• Stationary noise sources such as generators or pumps are located at least 100 feet away from noise-sensitive land uses as feasible.</li> <li>• Whenever possible, academic, administrative, and residential areas that will be subject to construction noise will be informed in writing at least a week before the start of each construction project.</li> <li>• Loud construction activity (i.e., construction activity such as jackhammering, concrete sawing, asphalt removal, and large-scale grading operations) within</li> </ul>	SU

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<b>NOIS-1 (cont)</b>			<p>100 feet of a residential or academic building shall not be scheduled during finals week.</p> <ul style="list-style-type: none"> <li>• Loud construction activity as described above within 100 feet of an academic or residential use shall, to the extent feasible, be scheduled during holidays, Thanksgiving break, Christmas break, Spring break, or Summer break.</li> <li>• Loud construction activity within 100 feet of a residential building shall be restricted to the hours between 7:30 AM and 7:30 PM, Monday through Saturday.</li> <li>• Loud construction activity within 100 feet of an academic building shall be scheduled to the extent feasible on weekends.</li> </ul>	
<b>NOIS-2</b>	Campus growth under the 2005 LRDP would result in increased vehicular traffic on the city road network, which would not result in a noticeable increase in ambient noise levels at modeled locations.	LS	Mitigation not required	NA
<b>NOIS-3</b>	Future residents on the campus would not be exposed to high noise levels from increased vehicular traffic on the campus road network.	LS	<p><b>NOIS-3</b> For future noise-sensitive land uses such as Family Student Housing and other housing complexes that would be constructed under the 2005 LRDP, building and area layouts shall incorporate noise control as a design feature, as feasible. Noise control features would include increased setbacks, landscaped berms or vegetation screens, and building placement to shield noise-sensitive exterior areas from direct roadway exposures. The Campus may also use other noise attenuation measures such as double-pane windows and insulation to minimize interior noise levels.</p>	NA

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<b>4.11 Population and Housing</b>				
<b>POP-1</b>	Development under the 2005 LRDP would directly induce substantial population growth in the study area by accommodating increased enrollment and additional employment.	S	No mitigation available	SU
<b>POP-2</b>	Campus growth under the 2005 LRDP would not indirectly induce substantial population growth in the area through extension of roads or other infrastructure.	LS	Mitigation not required	NA
<b>POP-3</b>	Growth of the campus under the 2005 LRDP, in conjunction with other regional growth, would create a demand for housing that combined with demand created by other growth in the county, would exceed the supply.	S	<b>POP-3</b> The Campus shall work with the City of Santa Cruz to identify means of providing additional housing in the city, including affordable housing, particularly in areas with good access to public transit.	SU
<b>4.12 Public Services</b>				
<b>PUB-1</b>	On-campus development and on-campus population under the 2005 LRDP would not result in significant environmental impacts associated with the provision of new or altered facilities for the UC Santa Cruz Police Department or the City of Santa Cruz's Police Department in order to maintain each department's applicable service objectives.	NI	Mitigation not required	NA
<b>PUB-2</b>	On-campus development and on-campus population under the 2005 LRDP would not result in significant environmental impacts associated with the provision of new or physically altered fire department facilities in order to maintain the response standards and service ratios.	LS	Mitigation not required	NA
<b>PUB-3</b>	On-campus residential population growth under the 2005 LRDP could create demand for public school facilities, but this increase could be accommodated in existing facilities. The demand would not require new facilities, the construction of which could result in significant environmental impacts.	LS	Mitigation not required	NA

<sup>1</sup>NA: Not Applicable; NI: No impact; LS: Less than significant; PS: Potentially significant; S: Significant; SU: Significant and unavoidable; SP: Speculative

**Table 2-1  
SUMMARY OF IMPACTS AND MITIGATION MEASURES IN THE 2005 LRDP EIR**

LRDP Impact		Level of Significance Prior to Mitigation <sup>1</sup>	LRDP Mitigation Measure	Level of Significance Following Mitigation <sup>1</sup>
<b>PUB-4</b>	On-campus population growth under the 2005 LRDP could increase the demand for library facilities, the construction of which would not result in significant environmental impacts.	LS	Mitigation not required	NA
<b>PUB-5</b>	Cumulative growth in study area population, including 2005 LRDP-related off-campus population, would result in demand for new or expanded police and fire service facilities in the study area, the construction of which would not result in significant adverse environmental impacts.	LS	Mitigation not required	NA
<b>PUB-6</b>	Cumulative growth in study area population, including 2005 LRDP-related off-campus population, would not result in demand for new school facilities.	LS	Mitigation not required	NA
<b>PUB-7</b>	Cumulative growth in study area population could result in the need for new regional libraries, the construction of which could result in significant environmental impacts. The contribution of the project to this cumulative impact would not be cumulatively considerable.	LS	Mitigation is not required	NA
<b>4.13 Recreation</b>				
<b>REC-1</b>	Increased on-campus population under the 2005 LRDP would result in increased demand for recreational facilities on campus and in the City of Santa Cruz, which would require the construction of new facilities, which would not result in significant environmental impacts.	LS	Mitigation not required	NA
<b>REC-2</b>	Increased on-campus population under the 2005 LRDP would result in increased use of recreational facilities on campus and in the city of Santa Cruz, which could result in deterioration of the facilities.	PS	<p><b>REC-2A</b> The Campus shall ensure that open space, tot lots, and similar facilities for use by families are included in all new family housing developments built on the campus under the 2005 LRDP.</p> <p><b>REC-2B</b> The Campus shall implement LRDP Mitigations HYD-3A and HYD-3B.</p>	LS

<sup>1</sup>NA: Not Applicable; NI: No impact; LS: Less than significant; PS: Potentially significant; S: Significant; SU: Significant and unavoidable; SP: Speculative

**Table 2-1  
SUMMARY OF IMPACTS AND MITIGATION MEASURES IN THE 2005 LRDP EIR**

LRDP Impact		Level of Significance Prior to Mitigation <sup>1</sup>	LRDP Mitigation Measure	Level of Significance Following Mitigation <sup>1</sup>
<b>REC-2 (cont)</b>			<p><b>REC-2C</b> The Campus shall work with the City of Santa Cruz to ensure that adequate signage is installed in Pogonip City Park to discourage the illegal use of bicycles on trails; undertake measures to regularly inform and educate students, faculty and staff about caretaking of the regional trail system and regional open spaces, by working with campus and other local outdoor recreation groups; and revise campus bicycle maps to explicitly identify Pogonip City Park rules regarding bicycle use.</p> <p><b>REC-2D</b> The Campus shall coordinate with the City of Santa Cruz's efforts in organizing an annual or semi-annual volunteer trail maintenance day, and shall assist in the recruitment of volunteers for these events from the UC Santa Cruz campus through campus advertising and education efforts.</p>	
<b>REC-3</b>	Development in the north campus under the 2005 LRDP would not result in the fragmentation of or other changes to the designated trails on the north campus.	LS	Mitigation not required	NA
<b>REC-4</b>	Cumulative growth in study area population, including 2005 LRDP-related off-campus population, could result in the development of new off-campus recreation facilities, the construction of which would not result in significant environmental impacts.	LS	<b>REC-4</b> The Campus will continue to make campus recreational facilities available to the public, and will provide casual recreation amenities, such as walking paths and picnic tables, that will be available for public use.	NA
<b>REC-5</b>	Cumulative growth in study area population, including 2005 LRDP-related off-campus population, would result in increased use of regional recreational facilities, which would not result in deterioration of most facilities. The contribution of the project to this impact would not be cumulatively considerable.	LS	<b>REC-5</b> The Campus shall implement LRDP Mitigations REC-2C, REC-2D and REC-4, above.	NA

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**Table 2-1  
SUMMARY OF IMPACTS AND MITIGATION MEASURES IN THE 2005 LRDP EIR**

LRDP Impact		Level of Significance Prior to Mitigation <sup>1</sup>	LRDP Mitigation Measure	Level of Significance Following Mitigation <sup>1</sup>
<b>4.14 Traffic, Circulation, and Parking</b>				
<b>TRA-1</b>	Campus growth under the 2005 LRDP would cause an increase in on-campus traffic that could result in unacceptable levels of service at two on-campus intersections if the growth in traffic outpaces the modifications to the on-campus circulation system proposed under the 2005 LRDP.	PS	<b>TRA-1</b> The Campus shall monitor the level of service at two intersections (Hagar Drive/McLaughlin Drive and Heller Drive/Meyer Drive) every three years beginning in 2007, and implement intersection improvements or signalization as needed to maintain an acceptable level of service.	LS
<b>TRA-2</b>	Campus growth under the 2005 LRDP would cause unacceptable levels of service at 11 off-campus intersections.	S	<b>TRA-2A</b> UC Santa Cruz shall review capital projects proposed under the 2005 LRDP as part of the environmental clearance process to determine if the additional traffic generated by the proposed projects would trigger the need for the specific intersection improvements listed in Table 4.14-17, or other improvements to achieve the City’s level of service standards. If the analysis indicates that, with the project’s traffic contribution, the levels of service would degrade to unacceptable levels, the Campus shall inform the City of this conclusion, and contribute its “fair share” (as defined below) of the cost of the needed improvements.  <b>TRA-2B</b> UC Santa Cruz shall expand its existing Transportation Demand Management programs with the objectives of increasing sustainable transportation modes (use of modes other than single-occupant vehicles) above 55 percent during the planning horizon of the 2005 LRDP and reducing peak hour traffic volumes. Potential measures that the Campus will consider for achieving this objective are listed in Table 4.14-18.	SU

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**Table 2-1  
SUMMARY OF IMPACTS AND MITIGATION MEASURES IN THE 2005 LRDP EIR**

<b>LRDP Impact</b>	<b>Level of Significance Prior to Mitigation<sup>1</sup></b>	<b>LRDP Mitigation Measure</b>	<b>Level of Significance Following Mitigation<sup>1</sup></b>
<b>TRA-3</b>	PS	<p><b>TRA-3A</b> The Campus shall implement LRDP Mitigation TRA-2B TDM measures to reduce on-campus parking demand associated with single-occupant vehicle commuters and with long-term storage of infrequently used vehicles.</p> <p><b>TRA-3B</b> The Campus shall monitor on-campus parking utilization rates annually, and will construct additional parking when demand approaches capacity. The Campus will use projected average daytime utilization rate in excess of 90 percent in a given parking zone as a measure of parking capacity.</p> <p><b>TRA-3C</b> The Campus shall continue to enhance existing parking management systems to maximize utilization of existing parking capacity. Parking capacity enhancements may include real-time monitoring of lot utilization, changeable message signs identifying available parking spaces, use-based parking permits, zoned parking permits, or other measures.</p>	LS
<b>TRA-4</b>	PS	<p><b>TRA-4A</b> UC Santa Cruz shall monitor on- and off-campus transit service and other alternative modes of transportation on an annual basis, to assess the need for improvements in campus circulation to accommodate changes in campus-related circulation demands.</p> <p><b>TRA-4B</b> Based on results of LRDP Mitigation TRA-4A, the Campus shall improve the operational efficiency and capacity of the campus transit system as needed to maintain transit cycle time, and shall work with SCMTD and other agencies to maintain and improve efficiency and capacity of the public transit system serving University facilities.</p> <p><b>TRA-4C</b> Based on the results of LRDP Mitigation TRA-4A, the Campus shall implement measures that reduce transit delay associated with pedestrian crosswalks on campus roadways.</p>	LS

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**Table 2-1  
SUMMARY OF IMPACTS AND MITIGATION MEASURES IN THE 2005 LRDP EIR**

LRDP Impact		Level of Significance Prior to Mitigation <sup>1</sup>	LRDP Mitigation Measure	Level of Significance Following Mitigation <sup>1</sup>
<b>TRA-4 (cont)</b>			<p><b>TRA-4D</b> The Campus shall coordinate implementation of needed campus roadway and circulation improvements identified in the 2005 LRDP with the pace of campus development, to the extent feasible.</p> <p><b>TRA-4E</b> Based on the results of LRDP Mitigation TRA-4A, the Campus shall implement the bicycle circulation elements of the 2005 LRDP as needed to maintain and enhance the effectiveness of bicycles as a transportation mode.</p> <p><b>TRA-4F</b> The Campus shall implement integrated transit, bicycle and pedestrian way-finding systems on the main campus.</p>	
<b>TRA-5</b>	Traffic generated by simultaneous full-capacity special events on campus would cause the off-campus intersections listed in Table 4.14-21 to operate at LOS E or F during event-related peak hours. On-campus, the special event traffic could cause congestion related to visitors searching for parking.	LS	<p><b>TRA-5A</b> The Campus shall implement LRDP Mitigations TRA-2A, TRA-2B, TRA-3B, TRA-3C, and TRA-4A through -4E.</p> <p><b>TRA-5B</b> The Campus shall improve parking management for special events, through appropriate expansion of on-campus parking enforcement at nights and on weekends in order to better manage parking resources to accommodate campus needs.</p> <p><b>TRA-5C</b> The Campus shall provide on-line parking permit sales and way-finding information for visitors in order to reduce back-ups of vehicles at the main entrance kiosk.</p> <p><b>TRA-5D</b> The Campus shall continue to promote use of the on-line Campus Events Calendar system to improve coordination between campus units, and to coordinate traffic and parking management for traffic-producing events.</p>	NA

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**Table 2-1  
SUMMARY OF IMPACTS AND MITIGATION MEASURES IN THE 2005 LRDP EIR**

LRDP Impact	Level of Significance Prior to Mitigation <sup>1</sup>	LRDP Mitigation Measure	Level of Significance Following Mitigation <sup>1</sup>	
<b>4.15 Utilities</b>				
<b>UTIL-1</b>	Development under the 2005 LRDP would require the expansion of campus and off-campus domestic/fire water conveyance systems, which would not cause significant environmental impacts.	LS	Mitigation not required	NA
<b>UTIL-2</b>	Development under the 2005 LRDP would require expansion of on- and off-campus wastewater conveyance facilities, the construction and operation of which would not result in significant environmental impacts.	LS	Mitigation not required	NA
<b>UTIL-3</b>	Development under the 2005 LRDP would require the expansion of campus storm drainage conveyance and detention facilities, which would not result in significant environmental impacts.	LS	Mitigation not required	NA
<b>UTIL-4</b>	Development under the 2005 LRDP would increase the volume of municipal solid waste that would require disposal, but would not require an expansion of the city landfill.	LS	<b>UTIL-4</b> The Campus will continue to improve its recycling and waste reduction programs and identify additional means of reducing waste.	NA
<b>UTIL-5</b>	Development under the 2005 LRDP would require the expansion of the campus electrical system, which would not result in significant environmental impacts.	LS	<b>UTIL-5</b> Where feasible, new campus buildings will be added to the Campus Energy Management System and heating and cooling will be controlled based on time of use of building and outside temperature.	NA
<b>UTIL-6</b>	Development under the 2005 LRDP would require the expansion of natural gas transmission systems, which would not result in significant environmental impacts.	LS	Mitigation not required	NA
<b>UTIL-7</b>	Development under the 2005 LRDP would require the expansion of campus cooling water and heating water generation and conveyance facilities, which would result in significant environmental impacts.	S	<b>UTIL-7</b> The Campus shall implement LRDP Mitigation AIR-2A.	SU
<b>UTIL-8</b>	Development under the 2005 LRDP would require expansion of campus communication facilities, which would not result in significant environmental impacts.	LS	Mitigation not required	NA

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**Table 2-1  
SUMMARY OF IMPACTS AND MITIGATION MEASURES IN THE 2005 LRDP EIR**

	<b>LRDP Impact</b>	<b>Level of Significance Prior to Mitigation<sup>1</sup></b>	<b>LRDP Mitigation Measure</b>	<b>Level of Significance Following Mitigation<sup>1</sup></b>
<b>UTIL-9</b>	Development under the 2005 LRDP, in conjunction with other regional growth in the SCWD service area, would generate increased demand for water during normal and drought years, and the development of new water supplies and infrastructure to serve normal and drought year demand could result in significant environmental impacts. The contribution of the proposed project to this impact would be cumulatively considerable.	S	<p><b>UTIL-9A</b> The Campus shall continue to implement water conservation strategies to reduce demand for water. Domestic water conservation strategies shall include the following or equivalent measures:</p> <ul style="list-style-type: none"> <li>• Continue the leak detection and repair program.</li> <li>• Install water meters in new employee housing developments to encourage residential water conservation.</li> </ul> <p><b>UTIL-9B</b> The Campus shall implement pilot programs for high-efficiency plumbing fixtures. If the programs prove to be successful, the Campus shall revise its standards to require use of the fixtures in all new buildings and in existing buildings as the existing fixtures need to be replaced.</p> <p><b>UTIL-9C</b> Residential use washing machines installed in student housing on campus must be certified by the Consortium on Energy Efficiency (CEE) to have a water factor (WF) of 5.5 or less or meet an equivalent standard. New washing machines purchased by UC Santa Cruz Office of Physical Education, Recreation and Sports (OPERS) shall meet applicable water efficiency standards for institutional machines. The University shall provide residents of employee housing with information on high-efficiency washing machines.</p> <p><b>UTIL-9D</b> The Campus shall require all new landscape installations to incorporate water-efficient landscaping practices. Water-conservative landscaping practices shall include but will not be limited to: use of water-efficient plants, temporary irrigation systems for plant establishment for areas where mature plants will be able to survive without regular irrigation; grouping of plants according to their water requirements, design of planting areas to maximize irrigation pattern efficiency, and mulch covering in planting areas.</p>	SU

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**Table 2-1  
SUMMARY OF IMPACTS AND MITIGATION MEASURES IN THE 2005 LRDP EIR**

LRDP Impact	Level of Significance Prior to Mitigation <sup>1</sup>	LRDP Mitigation Measure	Level of Significance Following Mitigation <sup>1</sup>
<b>UTIL-9 (cont)</b>		<p><b>UTIL-9E</b> The Campus shall require installation of waterless urinals in new development and when replacing urinals in existing buildings.</p> <p><b>UTIL-9F</b> When campus water consumption reaches 250 million gallons per year, the Campus shall initiate a program to retrofit existing campus facilities with the current efficient campus standards for toilets, showers and sinks, and with waterless urinals.</p> <p><b>UTIL-9G</b> Before campus annual water consumption reaches 300 million gallons, the Campus shall conduct a study on feasible measures for utilization of reclaimed water (including rainwater, grey water and/or recycled water) in new development. Potential uses of reclaimed water include cooling, irrigation, and toilet flushing. The study shall include a plan to utilize reclaimed water in new development. The Campus shall implement the plan when campus annual water consumption reaches 350 million gallons.</p> <p><b>UTIL-9H</b> When campus water consumption reaches 300 million gallons per year, the Campus shall implement the following water conservation measures:</p> <ul style="list-style-type: none"> <li>• Explore and implement additional means to reduce residential water use. These means could include but would not be limited to installing timers on showers and use of dual-flush toilets.</li> <li>• Add existing irrigation systems to the campus's central control system and complete the metering of all irrigation systems on the campus where the point of connection irrigates one acre or more.</li> <li>• Pursue replacement of natural turf on athletic fields with artificial turf.</li> <li>• Initiate a water conservation education program. Examples of measures that could be included in this program are:</li> </ul>	

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**Table 2-1  
SUMMARY OF IMPACTS AND MITIGATION MEASURES IN THE 2005 LRDP EIR**

	<b>LRDP Impact</b>	<b>Level of Significance Prior to Mitigation<sup>1</sup></b>	<b>LRDP Mitigation Measure</b>	<b>Level of Significance Following Mitigation<sup>1</sup></b>
<b>UTIL-9 (cont)</b>			<p data-bbox="1016 683 1115 708"><b>UTIL-9I</b></p> <p data-bbox="1157 683 1732 792">If and when the City implements drought emergency management measures, the University will implement the following measures for the duration of the drought emergency:</p> <ul data-bbox="1157 805 1732 1149" style="list-style-type: none"> <li data-bbox="1157 805 1732 914">• Reduce use of potable water for irrigation on the campus landscape, the CASFS and the Arboretum in accordance with reductions required by the City for similar users.</li> <li data-bbox="1157 927 1732 1060">• Utilize water from the existing supply well in Jordan Gulch for non-potable uses. The Campus shall implement a program of monitoring flow at downgradient springs during the time when the well is being used.</li> <li data-bbox="1157 1073 1732 1149">• Require that residential water use on campus be reduced consistent with the City’s target for multifamily residential facilities.</li> </ul>	
<b>UTIL-10</b>	Development under the 2005 LRDP, in conjunction with other regional development, would generate increased demand for wastewater treatment facilities, landfills, energy, and natural gas in the region, and the expansion of associated utilities and service systems to meet this demand would not result in significant environmental impacts.	LS	Mitigation not required	NA

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**Table 2-2**  
**SUMMARY COMPARISON OF 2005 LRDP ALTERNATIVES**

LRDP Impact	LRDP Impact Statement	Proposed LRDP (Before Mitigation)	Satellite Campus	Reduced Enrollment Growth	Southerly Expansion	No Project
<b>Aesthetics</b>						
AES-3	Development under the 2005 LRDP could substantially damage scenic resources on campus around the lower campus meadows.	PS	L	E/L	M	L
AES-4	Development under the 2005 LRDP could substantially damage the aesthetic quality of the Cowell Ranch Historic District as a scenic resource.	PS	L	L	M	L
AES-5	Development under the 2005 LRDP could substantially degrade the existing visual character of the campus and adjacent areas.	PS	L	L	M	L
AES-6	Development under the 2005 LRDP could create new sources of substantial light or glare on campus that would adversely affect daytime or nighttime views in the area.	PS	L	L	M	L
<b>Air Quality</b>						
AIR-2	Campus growth under the 2005 LRDP would result in daily operational emissions above the MBUAPCD thresholds, and therefore the proposed project may contribute substantially to a violation of air quality standards or hinder attainment of the regional air quality plan.	S	L	L	E	L
AIR-4	Growth associated with the 2005 LRDP would conflict with the Air Quality Management Plan.	S	L	L	E	L
AIR-5	Campus operations under the 2005 LRDP would not result in a substantial human health risk to campus occupants and other populations in the vicinity of the campus from long-term exposures to TACs, but would result in a substantial health risk to campus occupants at certain on-campus locations from short-term exposures to TACs.	S	L	L	E	L
<b>Biological Resources</b>						
BIO-1	Development on the main campus under the 2005 LRDP could result in a substantial adverse effect, directly and indirectly on northern maritime chaparral, a sensitive natural community identified by CDFG (CNDDDB 2005), and Santa Cruz Manzanita, a special-status plant that generally occurs within northern maritime chaparral areas.	PS	L	L	L	L
BIO-2	Development on the main campus under the 2005 LRDP could result in a substantial adverse impact to coastal prairie, a sensitive natural community.	PS	L	E	L	L
BIO-3	Development under the 2005 LRDP could result in substantial, adverse direct and indirect impacts to jurisdictional wetlands.	PS	L	L	L	L

**Table 2-2  
SUMMARY COMPARISON OF 2005 LRDP ALTERNATIVES**

<b>LRDP Impact</b>	<b>LRDP Impact Statement</b>	<b>Proposed LRDP (Before Mitigation)</b>	<b>Satellite Campus</b>	<b>Reduced Enrollment Growth</b>	<b>Southerly Expansion</b>	<b>No Project</b>
BIO-4	Construction of bridge crossings under the 2005 LRDP could result in a substantial adverse impact on riparian vegetation.	PS	L	L	L	L
BIO-6	Development under the 2005 LRDP has the potential to introduce or cause the spread of noxious weeds, which could reduce the abundance of native plants and sensitive communities.	PS	E	E	L	L
BIO-7	Development under the 2005 LRDP could result in a substantial adverse impact on Ohlone tiger beetle populations on the campus from increased bicycle use on trails and obstruction of potential movement corridors by trees planted in the Arboretum.	PS	L	L	E	L
BIO-9	Development under the 2005 LRDP could result in a substantial adverse effect on breeding or important movement habitat for California red-legged frog; direct impacts to California red-legged frog populations; or indirect impacts on the species from downstream hydrological changes in the Moore Creek watershed.	PS	L	E	M	E
BIO-11	Development under the 2005 LRDP could result in the loss or abandonment of active nests for special-status raptors.	PS	L	L	L	L
BIO-12	Development under the 2005 LRDP could potentially result in a substantial adverse impact on the campus western burrowing owl population.	PS	L	L	M	L
BIO-13	Development under the 2005 LRDP could result in a substantial adverse impact associated with the disturbance of roosting sites for special-status bats.	PS	L	L	L	L
BIO-14	Development under the 2005 LRDP could result in a substantial adverse impact associated with the loss of potential San Francisco dusky-footed woodrat nests.	PS	L	L	L	L
BIO-15	Development under the 2005 LRDP could interfere substantially with the movement of wildlife species or with established native resident or migratory wildlife corridors including the loss of potential migratory and/or wintering habits for the Monarch butterfly.	PS	L	E	M	L
<b>Cultural Resources</b>						
CULT-1	Implementation of the 2005 LRDP could damage or destroy an archaeological resource as the result of grading, excavation, ground disturbance or other project development.	PS	E	E	E/M	E/L
CULT-2	Implementation of the proposed 2005 LRDP could damage or destroy a historic building or structure as the result of alteration of the building or of the site, or other project development.	PS	L	E/L	E/M	E/L

**Table 2-2**  
**SUMMARY COMPARISON OF 2005 LRDP ALTERNATIVES**

<b>LRDP Impact</b>	<b>LRDP Impact Statement</b>	<b>Proposed LRDP (Before Mitigation)</b>	<b>Satellite Campus</b>	<b>Reduced Enrollment Growth</b>	<b>Southerly Expansion</b>	<b>No Project</b>
CULT-3	Implementation of the LRDP could cause a substantial adverse change in the significance of a historical resource or unique archaeological resource, as defined in CEQA Guidelines 15064.5, and the values that contribute to the significance of the resource cannot be preserved through documentation and data recovery.	S	L	L	E	L
CULT-4	Implementation of the proposed 2005 LRDP could disturb human remains, including those interred outside of formal cemeteries.	PS	E/L	L	E	L
CULT-5	Development under the 2005 LRDP has the potential to disturb or destroy unique paleontological resources.	PS	L	L	L	E/L
CULT-6	Increased population on campus as a result of implementation of the 2005 LRDP could result in damage to the scientific value of unique geologic resources.	PS	L	L	E	L
<b>Geology, Soils and Seismicity</b>						
GEO-1	Development under the 2005 LRDP could occur on a geologic unit or soil that would become unstable as a result of the project and could result in on- or off-site landslides, lateral spreading, or liquefaction, creating potential risks to life or property.	PS	E/L	E	E	L
GEO-2	Development under the 2005 LRDP could result in construction of campus facilities on expansive soil, but this would not create potential risks to life and property.	PS	E/L	E	E	L
GEO-4	Development under the 2005 LRDP could result in construction of facilities on sites underlain by karst features, which could lead to settling or collapse beneath the structures.	PS	L	L	M	L
<b>Hazards and Hazardous Materials</b>						
HAZ-9	Campus development under the 2005 LRDP could potentially interfere physically with the campus's Emergency Operations Plan (EOP).	PS	L	E	L	L
HAZ-10	Campus development under the 2005 LRDP would result in increased risk from wildland fires.	PS	L	E	L	L
HAZ-11	Implementation of the proposed 2005 LRDP would increase use of hazardous materials by non-UC Santa Cruz entities on campus, which could create hazards to the public or the environment under routine and upset conditions.	PS	E	E	E	L



**Table 2-2  
SUMMARY COMPARISON OF 2005 LRDP ALTERNATIVES**

<b>LRDP Impact</b>	<b>LRDP Impact Statement</b>	<b>Proposed LRDP (Before Mitigation)</b>	<b>Satellite Campus</b>	<b>Reduced Enrollment Growth</b>	<b>Southerly Expansion</b>	<b>No Project</b>
<b>Hydrology and Water Quality</b>						
HYD-2	Campus development under the 2005 LRDP could result in storm water runoff during construction, which could substantially degrade water quality.	PS	L	L	E	L
HYD-3	Campus development under the 2005 LRDP would alter drainage patterns in the project area, and increase the rate or amount of surface runoff, which could result in substantial siltation or erosion on or off site, and increase the amount of urban pollutants in storm water runoff, which could affect water quality.	S	L	L	M	L
HYD-6	Implementation of the 2005 LRDP would alter drainage patterns on the campus, increase the rate and amount of surface runoff, potentially affect the quality of runoff, and therefore could cause flooding and water quality impacts in caves on or off site.	PS	L	L	E	L
<b>Noise</b>						
NOIS-1	Construction of campus facilities pursuant to the 2005 LRDP could expose nearby sensitive receptors to excessive airborne noise but not to excessive groundborne vibration or groundborne noise.	PS	L	E	E	L
<b>Population and Housing</b>						
POP-1	Development under the 2005 LRDP would directly induce substantial population growth in the study area by accommodating increased enrollment and additional employment.	S	L	L	E	L
POP-3	Growth of the campus under the 2005 LRDP, in conjunction with other regional growth, would create a demand for housing that combined with demand created by other growth in the county, would exceed the supply.	S	L	L	E	L
<b>Recreation</b>						
REC-2	Increased on-campus population under the 2005 LRDP would result in increased use of recreational facilities on campus and in the City of Santa Cruz, which could result in deterioration of the facilities.	PS	L	L	E	L
<b>Traffic</b>						
TRA-1	Campus growth under the 2005 LRDP would cause an increase in on-campus traffic that could result in unacceptable levels of service at two on-campus intersections if the growth in traffic outpaces the modifications to the on-campus circulation system proposed under the 2005 LRDP.	PS	E	L	E	L

**Table 2-2**  
**SUMMARY COMPARISON OF 2005 LRDP ALTERNATIVES**

<b>LRDP Impact</b>	<b>LRDP Impact Statement</b>	<b>Proposed LRDP (Before Mitigation)</b>	<b>Satellite Campus</b>	<b>Reduced Enrollment Growth</b>	<b>Southerly Expansion</b>	<b>No Project</b>
TRA-2	Campus growth under the 2005 LRDP would cause unacceptable levels of service at 11 off-campus intersections.	S	L	L	E	L
TRA-3	If the development of planned parking does not keep pace with other growth on campus, or if parking supply is reduced as a result of development on existing parking lots, campus growth under the 2005 LRDP could generate demand for parking in excess of on-campus parking capacity.	PS	L	L	E	L
TRA-4	Campus growth under the 2005 LRDP would result in increases in circulation volumes (numbers of pedestrians, bicycles, and transit and other motor vehicles) that would conflict with and reduce the effectiveness of alternative modes of transportation, including transit, bicycle and pedestrian travel.	S	E	L	E	L
<b>Utilities</b>						
UTIL-7	Development under the 2005 LRDP would require the expansion of campus cooling water and heating water generation and conveyance facilities, which would result in significant environmental impacts.	S	L	L	E	E/L
UTIL-9	Development under the 2005 LRDP, in conjunction with other regional growth in the SCWD service area, would generate increased demand for water during normal and drought years, and the development of new water supplies and infrastructure to serve normal and drought year demand could result in significant environmental impacts. The contribution of the proposed project to this impact would be cumulatively considerable.	S	L	L	E	L

**Note:**

Project: PS=Potentially significant; S=Significant  
 Alternatives: L=Less severe than project; E= Roughly equal to project; M=More severe than project