

Chapter 6 Other CEQA Considerations .....6-1

6.1 Significant and Unavoidable Environmental Impacts .....6-1

6.2 Significant Irreversible Environmental Effects .....6-2

6.3 Growth-Inducing Impacts .....6-4

6.3.1 Existing Conditions .....6-5

6.3.2 Growth Inducing Impacts of the 2005 LRDP .....6-5

6.4 References.....6-9



## OTHER CEQA CONSIDERATIONS

Section 15126 of the California Environmental Quality Act (CEQA) Guidelines requires that all aspects of a project be considered when evaluating its impact on the environment, including planning, acquisition, development and operation. As part of this analysis, the EIR must identify the following three types of impacts:

- *Significant environmental effects that cannot be avoided if the proposed project is implemented;*
- *Significant irreversible environmental effects that would be involved in the proposed project should it be implemented; and*
- *Growth-inducing impacts of the proposed project.*

The following sections identify each of these types of impacts based on analyses contained in Chapter 4, *Environmental Setting, Impacts, and Mitigation*.

## 6.1 SIGNIFICANT AND UNAVOIDABLE ENVIRONMENTAL IMPACTS

This section identifies significant impacts that could not be eliminated or reduced to a less-than-significant level by mitigation measures imposed by the University. The final determination of significance of impacts and of the feasibility of mitigation measures will be made by the Board of Regents of the University of California as part of its certification action for the EIR.

A summary of the Environmental Impacts and Mitigation Measures is contained in Chapter 2 of this EIR. Sections 4.1 through 4.15 provide a comprehensive identification of the proposed project's environmental effects, including the level of significance both before and after mitigation.

The following significant and unavoidable impacts would result from development proposed under the 2005 LRDP:

### Air Quality

LRDP Impact 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.

LRDP Impact AIR-5: Growth associated with the 2005 LRDP would conflict with the Air Quality Management Plan.

### Cultural Resources

LRDP Impact CULT-3 Implementation of the 2005 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.

#### Hydrology and Water Quality

LRDP Impact 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.

#### Noise

LRDP Impact 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.

#### Population and Housing

LRDP Impact POP-1: Development under the 2005 LRDP would directly induce substantial population growth in the study area by accommodating increased enrollment and additional employment and by proposing new housing, and this could result in adverse environmental effects with respect to land development, traffic, infrastructure, and public services.

LRDP Impact POP-3: Growth of the campus under the 2005 LRDP, in conjunction with other regional growth, would create a cumulative demand for housing that would exceed the supply.

#### Traffic and Circulation

LRDP Impact TRA-2: Campus growth under the 2005 LRDP would cause unacceptable levels of service at 11 off-campus intersections.

#### Utilities

LRDP Impact 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.

## 6.2 SIGNIFICANT IRREVERSIBLE ENVIRONMENTAL EFFECTS

Section 15126.2(c) of the CEQA Guidelines requires a discussion of any significant irreversible environmental changes that would be caused by the proposed project. Specifically, Section 15126.2(c) states:

*Uses of nonrenewable resources during the initial and continued phases of the project may be irreversible, since a large commitment of such resources makes removal or nonuse thereafter unlikely. Primary impacts and, particularly, secondary impacts (such as highway improvement which provides access to a previously inaccessible area) generally commit future generations to similar uses. Also, irreversible damage can result from environmental accidents associated with the project. Irretrievable commitments of resources should be evaluated to assure that such current consumption is justified.*

Generally, a project would result in significant irreversible environmental changes if:

- *The primary and secondary impacts would generally commit future generations to similar uses.*
- *The proposed consumption of resources is not justified (e.g., the project involves the wasteful use of energy).*
- *The project would involve a large commitment of nonrenewable resources.*
- *The project involves uses in which irreversible damage could result from any potential environmental accidents associated with the project.*

Development under the 2005 LRDP would result in the continued commitment of the UC Santa Cruz campus to institutional uses, thereby precluding any other uses for the lifespan of the campus. The University of California's ownership of the campus represents a long-term commitment of the campus lands to an institutional use. Restoration of the campus to pre-developed conditions is not feasible given the degree of disturbance, the urbanization of the area, and the level of capital investment.

Additional irreversible commitments to future uses include those related to new development on the north campus. Development of these forested lands would constitute an irreversible use of these lands because once buildings or pavement are constructed underlying soils would no longer be available or viable for forestry. Campus growth under the 2005 LRDP would result in the loss of approximately 50.2 acres of sensitive habitat for plants and wildlife and about 124 acres of redwood forest and mixed forest habitat. As discussed in Section 4.4, *Biological Resources* (Volume I), the Campus would implement mitigation measures to reduce impacts to sensitive biological resources, and would preserve and enhance appropriate habitat elsewhere within the campus lands.

Resources that will be permanently and continually consumed by project implementation include water, electricity, natural gas, and fossil fuels; however, the consumption of these resources would not represent unnecessary, inefficient, or wasteful use of resources. The growth in student enrollment, and the associated growth in the campus population, is responsive to growth that has already occurred in the state as the children of the "baby boom" generation mature to college age. Therefore, natural resources are currently being consumed by this demographic group and would continue to be consumed by this group at some location. Nonetheless, construction activities related to the proposed 2005 LRDP would result in the irretrievable commitment of nonrenewable energy resources, primarily in the form of fossil fuels (including fuel oil, natural gas, and gasoline) for automobiles and construction equipment.

The University of California has instituted several water conservation measures. These include a water conservation program to reduce the use of irrigation water by using drought tolerant species in

landscaping, installing drip irrigation where appropriate, using automatic timing systems to apply irrigation water during the part of the day when evaporation rates are low, and installing of water meters. The Campus has been installing low-flow fixtures in new buildings to minimize water consumption. Similar mitigation measures are included in this EIR to ensure that the Campus will continue to reduce the consumption of water.

The Campus has also instituted lighting and other energy conservation measures and has been replacing in-building lighting systems with up-to-date energy-saving equipment. Lighting conservation efforts in new construction include installation of occupancy sensors to automatically turn off lights when not in use, lighting reflectors, electronic ballasts, and energy-efficient lamps. In addition, the Campus will continue to construct new facilities under the 2005 LRDP in accordance with specifications contained in Title 24 of the CCR, and with the UC Green Building Policy.

With respect to operational activities on campus, compliance with all applicable building codes, as well as 2005 LRDP mitigation measures, 2005 LRDP objectives, and standard campus conservation features, would ensure that all natural resources, including water, are conserved to the maximum extent feasible. It is also possible that new technologies or systems will emerge, or will become more cost-effective or user-friendly, to further reduce the campus's reliance upon nonrenewable energy resources. Overall, the consumption of natural resources would increase at a lesser rate than the projected population increase due to the variety of energy and water conservation measures that the Campus has implemented and will continue to implement.

The CEQA Guidelines also require a discussion of the potential for irreversible environmental damage caused by an accident associated with the project. While the campus uses, transports, stores, and disposes of hazardous wastes, as described in Section 4.7, *Hazards and Hazardous Materials* (Volume I), the campus complies with all applicable state and federal laws and existing campus programs, practices, and procedures related to hazardous materials, which reduces the likelihood and severity of accidents that could result in irreversible environmental damage. In fact, over the campus history, there has never been an accident that resulted in irreversible environmental damage, indicating that current practices with respect to hazardous materials handling are adequate, and thus the potential for the 2005 LRDP to cause irreversible environmental damage from an accident or upset of hazardous materials, is less than significant.

### 6.3 GROWTH-INDUCING IMPACTS

As required by the CEQA Guidelines, an EIR must discuss ways in which a potential project could induce growth. A project may be growth inducing if it directly or indirectly fosters economic or population growth or the construction of new housing, removes obstacles to population growth, or requires or encourages the construction of new facilities. According to CEQA Guidelines Section 15126.2(d), "it must not be assumed that growth in any area is necessarily beneficial, detrimental, or of little significance to the environment."

The effect of new population directly added by campus growth under the 2005 LRDP is evaluated in Section 4.11, *Population and Housing*. The discussion of the removal of obstacles to growth relates directly to the removal of infrastructure limitations or regulatory constraints that could result in growth

unforeseen at the time of project approval. The potential for LRDP-related infrastructure improvements to induce growth is also discussed in Section 4.11. The analysis presented in this section discusses the potential for the 2005 LRDP to induce growth in the study area through the workings of the multiplier process.

### 6.3.1 Existing Conditions

Since it was established at Santa Cruz in 1965 as a general campus of the University of California, the UC Santa Cruz campus has grown gradually over the years to offer 61 undergraduate majors, 32 fields of graduate studies, and one professional program, the School of Engineering.

Commensurate with the growth in population at the state level, enrollment and employment at UC Santa Cruz have grown over the years. In 1988-89, when the last LRDP for the campus was prepared, based on a three-quarter average FTE, about 8,785 students were enrolled on the UC Santa Cruz campus. In the same year, about 2,516 faculty and staff were employed on the campus. By 2003-04, the on-campus student enrollment had increased to about 14,050 FTE, and the faculty and staff had increased to approximately 4,080 FTE, an increase in the overall campus population of approximately 60 percent since 1988-89.

The UC Santa Cruz campus is a significant economic force in the local economy. In 2002-03, the campus faculty and staff earned an estimated \$216 million (after taxes) in salaries and wages, of which about \$195 million were spent locally. (UC Santa Cruz n.d.). Apart from the income infused in the local economy through the spending of wages and salaries by these employees, additional income is generated by the expenditures made by students and visitors and by the Campus. An estimated \$200 million was spent by students and campus visitors in the local economy in 2002-03. In the same year, campus expenditures on goods and services in the local economy were approximately \$41 million. Additional money was infused in the local economy by construction projects; an estimated \$6.2 million worth of contracts were awarded to local contractors in 2002-03. Through the working of the income and employment multiplier processes, it is estimated that campus-related spending generates a significant amount of income (about \$1 billion) and supports indirect and induced jobs in the local economy.

### 6.3.2 Growth Inducing Impacts of the 2005 LRDP

Potential growth inducing impacts of the 2005 LRDP are evaluated with respect to a study area that includes all of Santa Cruz County. This is the area that is within easy commuting distance of the campus. About 94 percent of all students, and about 85 percent of UC Santa Cruz faculty and staff, live on campus or elsewhere within Santa Cruz County. It is expected that the majority of the population added to the region as a result of the 2005 LRDP would also live in this study area, and therefore most of the growth impacts would occur within this area. The remainder of the direct growth (associated with an estimated 6 percent of new students and about 15 percent of new faculty and staff) would be expected to occur outside the County, and would be distributed among a large number of communities, and therefore would not be expected to substantially affect those out-of-county communities.

The 2005 LRDP would be considered growth inducing for a number of reasons:

- It would directly increase the study area population by providing facilities so that campus student population would increase from approximately 14,050 in 2003-04 to approximately 21,000 in 2020-21. It would also cause employment on the campus to increase from approximately 4,080 to about 5,600 in 2020-21. As some of the new students and most of the employees would be accompanied by dependents, the 2005 LRDP could cause the regional population to increase by an estimated 7,861 to 9,499 persons (depending on the scenario, as discussed below) over 2003-04 levels. Assumptions used to estimate this growth are discussed in the following section.
- The 2005 LRDP would also indirectly increase employment and population in the region through the expenditures made by the Campus and by students, faculty and staff which would create or support up to 2,645 additional jobs and attract about 1,322 non-local persons and their dependents to the study area as a result of these jobs.

Each of these aspects of growth inducement is discussed below.

### 6.3.2.1 Direct Population and Employment Growth

With the implementation of the 2005 LRDP, the total UC Santa Cruz population (not including employees and students at the Marine Science Campus, or the dependents of new students, faculty and staff) would grow from a total of 18,130 in 2003-04 to an estimated 27,600 by 2020-21. This increase of 8,470 persons would consist of about 6,950 new UC Santa Cruz students and 1,520 faculty and staff.

Approximately 3,390 student beds would be provided on campus under the proposed 2005 LRDP. Therefore it is expected that almost half of the new demand for student housing under the 2005 LRDP would be met by on-campus housing, and about 3,560 new students would live off campus. Excluding 417 students who would commute from out-of-county locations, it is anticipated that the rest (3,143 students) would live in the study area. A small number of dependents of the non-local new students would also relocate into the study area.

Two scenarios are considered in assessing housing demand that would result from the project. Although some of the faculty and a significant portion of staff employees would be expected to be already living in the study area around the campus, for purposes of analysis under Scenario 1, it is assumed that all LRDP-related faculty and staff would be new to the study area. Of the 1,520 total new employees, about 228 would continue to commute to the campus from their homes outside the study area. About 138 employees would live in the proposed new on-campus faculty and staff housing units. The rest of the new employees (about 1,154) would be anticipated to seek housing in nearby communities. Under Scenario 2, the number of employees who would be new to the study area would be much smaller and only about 342 employees would seek housing off campus in the study area. As discussed in Section 4.11, *Population and Housing*, based on availability, cost, and personal preferences relative to residence location, about 32 percent of new students and about 28 percent of the new campus employees are expected to reside off-campus in the City of Santa Cruz. Other communities where they would reside include the central county communities of Capitola, Scotts Valley, Live Oak, Soquel and Aptos, and north county communities, such as Felton, Ben Lomond, Bonny Doon, and Davenport. All of these communities are addressed as a group in Section 4.11.



As discussed under LRDP Impact POP-3, if the study area is taken as a whole, there would be enough housing to handle the demand related to the 2005 LRDP. However, there would not be enough affordable housing, and if the LRDP-related demand is combined with the demand for housing from other regional growth, there would not be an adequate supply of housing to meet the cumulative demand. Therefore, it is expected that, in addition to the new housing provided for in the general plans of the affected communities, more housing would be constructed. According to the County of Santa Cruz General Plan EIR dated 1993, growth in the County (primarily residential development) would result in significant impacts related to the conversion of agricultural land to non-agricultural uses, increased use of water, increased demand for police, fire and school services, and traffic. The County's General Plan EIR does not address impacts on biological and cultural resources. Within the City of Santa Cruz, environmental impacts on agricultural lands, and biological and cultural resources from the development of new housing are considered less likely because much of the new housing in the City would be developed on infill or redevelopment sites where these resources would likely not be encountered.

To minimize the environmental effects of new housing and other urban uses, the General Plans of the affected jurisdictions contain policies to control urban encroachment, especially on agricultural lands and sensitive habitats. Furthermore, the environmental review process of each affected jurisdiction is designed to avoid, minimize, or mitigate environmental effects of specific development projects as they are proposed. However some significant and unavoidable impacts, especially related to habitat conversion and traffic, would be expected. By virtue of being a contributor to the regional demand for new housing and urban amenities, the Campus also would contribute to these environmental impacts as they are created by overall growth in regional housing and other urban amenities.

In addition to impacts from the development of new housing, LRDP-related population that would reside off campus in regional communities would place a demand on utilities and services such as water, sewer, schools, and parks in these affected communities. The cumulative impacts of this demand in conjunction with the demand due to regional growth on utilities and services in the affected communities are discussed in Section 4.12, *Public Services*; Section 4.13, *Recreation*; and Section 4.15, *Utilities*. By virtue of inducing regional growth, the Campus would contribute to the anticipated impacts from utility improvements.

### 6.3.2.2 Indirect Employment Growth

In addition to the direct population changes described above, additional changes in regional population would result as campus-serving businesses or other businesses move into the area or expand in response to the increased demand for goods and services. Therefore, apart from the direct jobs on the campus, the operation of the campus under the 2005 LRDP would result in the creation of new indirect and induced jobs. Indirect jobs are those that are created or supported when the campus purchases goods and services from businesses in the region, and induced jobs are created or supported when wage incomes of those employed in direct and indirect jobs are spent on the purchase of goods and services in the region.

To estimate indirect and induced jobs that could be created in the study area as a result of campus growth, regional employment and income multipliers for UC Santa Cruz were used. In 2003, the University of California retained the services of ICF Consulting to conduct a study of the impact of the activities of the

University on the economy of California. Among other impacts, this study estimated the multiplier effect of University spending on the economies of the regions in which its existing nine campuses, including UC Santa Cruz, were located. The multiplier effect is the ripple effect through the economy of every dollar that is spent, each of which generates more than the first dollar of economic activity.

The 10-county Bay Area was used as the regional economy to evaluate the effects of UC Santa Cruz. REMI, an econometric (input-output) model, was used to estimate the income and employment that would be generated by the campus-related spending. The analysis revealed that for every one job at UC Santa Cruz, there were between 1.74 and 2.14 indirect and induced jobs supported in the study region. The extent to which a region or a specific community captures these indirect and induced effects of primary or direct jobs and spending by the campus, employees or students depends on the opportunities available to the campus, employees, and students to spend money in the regional or local economy. If such opportunities are not available or are limited, the income “leaks” out of the local economy into other areas. According to the ICF study, the higher multiplier of 2.14 results if it is assumed that 50 percent of non-wage expenditures by the campus are made in the study region. If it is assumed that only 25 percent of the non-wage expenditures are made within the study region, the multiplier is lower (around 1.74 indirect and induced jobs for every direct job). Because the ICF study used the 10-county Bay Area as the study area and because a small fraction of non-wage expenditures by UC Santa Cruz are made within Santa Cruz County (out of a total of \$175 million spent by the Campus in 2002-03, about \$41 million were spent within the county), for purposes of analyzing the multiplier effect, the lower multiplier of 1.74 has been used in this EIR.

Based on a multiplier of 1.74 indirect/induced jobs for every new direct job on the campus, it is estimated that about 2,645 indirect and induced jobs would be created or supported in the county. It would be expected that most of these indirect and induced jobs would be created in the food, entertainment, and service sectors within the City of Santa Cruz where the majority of the off-campus population currently resides and where most of the local purchasing by students, faculty, and staff occurs.

It would also be expected that the campus-related indirect and induced employment growth would result in more commercial infill development on lands that are vacant or underutilized, especially in those parts of the city that are near the campus. The City’s General Plan identified parcels of vacant or underutilized commercial land to accommodate growth, and environmental impacts from this designation within the City of Santa Cruz through 2005 are analyzed in the General Plan EIR. An update of the City’s General Plan is not available at this time. However, it is anticipated that there would not be any major shifts in land use planning in the city and that future growth beyond 2005 will continue to emphasize infill and redevelopment because most of the city is built out. As specific commercial development projects are proposed, they will be subject to environmental review.

The direct, indirect, and induced jobs described above represent the bulk of the changes in employment that would result from campus growth under the 2005 LRDP. However, additional growth is also probable. This growth is related to the “magnet effect” of campuses whereby campus-serving businesses locate in close proximity to the campus, and the “incubator effect” of university campuses whereby businesses are established near a campus by persons associated with the campus. Both types of effects

vary widely by campus, and the magnitude of growth, especially due to the incubator effect, cannot be predicted with much precision.

### 6.3.2.3 Indirect Population Growth

The indirect and induced employment that would result from the implementation of the proposed 2005 LRDP could in turn result in additional population growth as individuals move into the study area to fill these jobs. However, a large influx of non-local population into the county is not expected to result from these 2,645 indirect and induced jobs for a number of reasons. The County has a large number of employed residents who presently commute out of the county for work. According to Census 2000, approximately 32,500 county residents 16 years and older worked outside the county (Census 2000). It is anticipated that some of these persons would stop commuting out of the county and would take up the new indirect and induced locally-available jobs related to campus growth. In addition, Santa Cruz County unemployment rates have been high since the early 1990s. Except for 2000, when the unemployment rate dropped to 5.2 percent, in all the years since 1990, the average annual unemployment rate for Santa Cruz County has been greater than 6 percent and as high as 10 percent in some years (EDD 2005). Therefore, a pool of local labor should be available to fill these jobs. Furthermore, a large number of the anticipated indirect and induced jobs would be in the retail and services sectors and would not require special skills, and therefore could be filled by students or by dependents/spouses of persons who move to the area to fill jobs on the campus. Assuming that at least half of the indirect and induced jobs would be filled by persons seeking jobs closer to home, unemployed persons already residing in the study area, or students and dependents of campus employees, it is estimated that about 1,322 new persons (half of 2,645 indirect and induced jobs) and their dependents would move into the study area as a result of the indirect/induced jobs supported by campus growth in the study area. The demand that this population would place on utilities and services such as sewer, schools, and parks in these affected communities is accounted for in the cumulative analyses contained in Section 4.12, *Public Services*; Section 4.13, *Recreation*; and Section 4.15, *Utilities*.

## 6.4 REFERENCES

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