

Final EIR: Responses to Comments

**UCSC MARINE SCIENCE
CAMPUS CLRDP**

Environmental Impact Report

SCH No. 2001112014

September 2004

Prepared for

*University of California, Santa Cruz
Environmental Assessment Group*



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CHAPTER 1

INTRODUCTION

A. PURPOSE OF THE FINAL ENVIRONMENTAL IMPACT REPORT

Under the California Environmental Quality Act (CEQA) and the University of California procedures for implementing CEQA, UC Santa Cruz is required, after completion of a draft environmental impact report (Draft EIR), to consult with and obtain comments from public agencies that have legal jurisdiction with respect to the proposed project, and to provide the general public with opportunities to comment on the Draft EIR. UC Santa Cruz is also required to respond to significant environmental issues raised in the review and consultation process.

This Final EIR Response to Comments Document has been prepared to respond to agency and public comments received on the Draft EIR for the UCSC Marine Science Campus Coastal Long Range Development Plan (CLRDP).

The Draft EIR was issued for public review on January 29, 2004, and the public review period lasted from January 29 through March 19, 2004. The Draft EIR was made available to responsible agencies, trustee agencies, state agencies with jurisdiction by law, federal agencies, and interested parties and individuals. UC Santa Cruz also held a public meeting on February 19, 2004, to receive verbal comments on the Draft EIR, and a court reporter prepared a transcript of the meeting. This Final EIR presents agency and public comments received on the UCSC Marine Science Campus CLRDP EIR, as well as responses to these comments.

As specified in CEQA Guidelines (Section 15132), the Final EIR shall consist of (a) the Draft EIR or a revision of the Draft; (b) comments and recommendations received on the Draft EIR either verbatim or in summary; (c) a list of persons, organizations, and public agencies commenting on the Draft EIR; (d) the responses of the Lead Agency to significant environmental points raised in the review and consultation process; (e) any other information added by the Lead Agency.

Copies of the Final EIR are available for review during normal business hours at the UC Santa Cruz McHenry Library and the Central Branch of the City/County of Santa Cruz located at 224 Church Street, Santa Cruz, or can be requested in hard copy or CD-ROM format by contacting the UC Santa Cruz Planning Office. The documents are also posted on UC Santa Cruz's website at <http://ppc.ucsc.edu/cp/projects/11407>.

When certified, this EIR will serve as the base environmental document for the UCSC Marine Science Campus CLRDP.

CHAPTER 2

SUMMARY OF IMPACTS AND MITIGATION MEASURES

This section briefly describes the UCSC Marine Science Campus Coastal Long Range Development Plan (CLRDP) and the five near-term projects, together with the environmental issues associated with project implementation. This section also summarizes project impacts and mitigation measures identified in this EIR (see Table 2-1 at the end of this section).

A. PROJECT UNDER REVIEW

The project reviewed in this EIR consists of two components: (1) a Coastal Long Range Development Plan (CLRDP) for the University of California, Santa Cruz (UCSC) Marine Science Campus; and (2) specific development plans for five individual projects within the Marine Science Campus.

COASTAL LONG RANGE DEVELOPMENT PLAN (CLRDP)

The project includes adoption and implementation of the proposed CLRDP, a physical development and land use plan intended to guide and control future development, land use, and resource protection at the UCSC Marine Science Campus through 2020. The Preliminary Draft CLRDP, including Appendices A through E, was published in July 2002. The Draft CLRDP was published in July 2003, and an editorially revised version of the Draft CLRDP was published in January 2004. That Draft CLRDP is incorporated by reference into this EIR. The CLRDP was prepared over a period of about three years following the University's purchase of approximately 54 acres immediately to the east of, and adjacent to, its previous holdings of about 44 acres, which included the original Long Marine Laboratory (LML) site (16 acres), the adjacent Younger Lagoon Reserve (YLR) (25 acres), and the Seymour Marine Discovery Center site that had recently been acquired (3 acres).

Existing development on the 98-acre project site is limited primarily to the original 16-acre LML portion of the site and the additional 3-acre Seymour Marine Discovery Center site. Existing development on the LML site consists of a combination of permanent buildings, temporary and ancillary support structures, and outdoor space, for a net total of 108,604 gross square feet (gsf). (See Chapter 3, Project Description, for a full description of existing development.) Existing development also includes an approximately 2.5-acre federal "inholding," which is occupied by the National Oceanic and Atmospheric Administration (NOAA) National Marine Fisheries Service (NMFS) laboratory. This inholding is not part of the 98-acre project site, nor is it covered by the CLRDP.

The CLRDP building program proposes construction of new facilities within three development areas (upper terrace, middle terrace, and lower terrace) and the removal of some existing development. Under the proposed CLRDP, approximately 409,100 square feet (sf)¹ of new

¹ Unless noted otherwise, all building area space reported in this EIR is in gross square feet.

building area would be constructed on the Marine Science Campus, and approximately 31,244 sf of existing building area would be removed and replaced, resulting in 377,856 sf of net new building area. An additional 152,000 sf of outdoor development would be constructed, for a total net new development of 529,856 sf. The CLRDP building program would include the following uses: 254,500 sf for Marine Research and Education; 70,000 sf for Outdoor Research Area; 19,000 sf for Support Facilities; 98,100 sf for Support Housing; 107,500 sf for Equipment Storage and Maintenance; and 12,000 sf for Seawater System Expansion. The additional seawater facilities would provide for a total system capacity of approximately 6,000 gallons per minute (gpm). The CLRDP building program would include removal of approximately 31,244 sf of existing building area consisting of: 3,000 sf of Temporary Office Trailers; 26,844 sf of Greenhouses; and 1,400 sf of Temporary Caretaker Housing. The CLRDP would also include approximately 550 additional parking spaces, of which 50 would be designated for dual use (i.e., either campus visitor or public coast access parking) and 10 would be designated solely for public coastal access parking. Recreational facilities proposed by the CLRDP would include paved and unpaved recreational courts, an enhanced trail network, two new overlooks, and improvements to an existing onsite overlook. The CLRDP also provides for various onsite infrastructure and other improvements to serve the new development. See Chapter 3, Project Description, for a more detailed description of the proposed CLRDP.

NEAR-TERM PROJECTS

Five projects are expected to be constructed in the early phases of the building program by 2010. Amongst the building locations depicted in the CLRDP prototype site plan are specific sites for these five near-term projects:

- A Shared Campus Warehouse and Laydown Facility (with about 37,500 sf of warehouse and 70,000 sf of laydown yard space) would be sited on the upper terrace development area.
- 42 Apartment/Townhouse Units with a combined building space of 43,050 sf would be constructed on the middle terrace development area.
- The United States Geological Survey (USGS) Western Coastal and Marine Geology Facility would include about 78,500 sf of new office and laboratory space within two buildings on the middle terrace development area.
- The Monterey Bay Aquarium Sea Otter Research and Conservation Center (SORACC) (with about 10,000 sf of building space and 40,000 sf of yard space) would be located on the middle terrace development area.
- The Center for Ocean Health Phase II facility (18,000 sf) would consist of an addition to the existing Center for Ocean Health building and would be located on the lower terrace development area. Additionally, this proposed project would include the construction of two new public-access overlooks (Overlooks A and E) and improvement of an existing overlook (Overlook D).

This EIR evaluates specific development plans for these five near-term projects.

B. AREAS OF POTENTIAL CONTROVERSY

In response to the November 1, 2001, issuance of the Notice of Preparation for this EIR, UCSC received 10 comment letters from agencies and organizations, including the California Coastal Commission, the California Department of Toxic Substances Control (DTSC), the California Department of Transportation (Caltrans), the City of Santa Cruz, the Monterey Bay Unified Air Pollution Control District (MBUAPCD), the Sierra Club, and the Terrace Point Action Network. Seven members of the public also submitted written comments on the NOP. A public scoping meeting on the EIR was held for the proposed project on November 14, 2001, at the Seymour Marine Discovery Center at the Long Marine Laboratory; about 17 members of the public attended the meeting, with 6 people providing oral comments on the project.

Areas of potential controversy that were identified through this input, such as the residual effect of pesticides on soil that may be excavated from the site, the conversion of currently fallow agricultural land for new development onsite, the potential impact of development on nearby sensitive habitats and animal species, and the visual impact of increased development within an urban-to-rural transitional area, are addressed in sections of Chapter 4, Environmental Setting, Impacts, and Mitigation Measures of the EIR.

C. IMPACTS AND MITIGATION MEASURES

Under CEQA, a significant effect on the environment is defined as a substantial or potentially substantial adverse change in any of the physical conditions within the area affected by a project, including effects on land, air, water, minerals, flora, fauna, ambient noise, and objects of historic or aesthetic significance. The criteria used to determine whether or not effects are significant are included in the introduction to each topic discussion in Chapter 4 of this EIR.

This EIR presents information in the following 16 impact categories, as required under CEQA and the *UC CEQA Handbook*: Aesthetics; Agricultural Resources; Air Quality; Biological Resources; Cultural Resources; Geology and Soils; Hazards and Hazardous Materials; Hydrology and Water Quality; Land Use and Planning; Mineral Resources; Noise; Population and Housing; Public Services; Recreation; Transportation/Traffic; and Utilities, Service Systems, and Energy.

Potential environmental impacts of the project are summarized in Table 2-1 at the end of this chapter. This table lists impacts and mitigation measures in three major categories: significant impacts that would remain significant even with mitigation, significant impacts that could be mitigated to a less-than-significant level, and less-than-significant impacts for which the EIR identifies mitigation. For each impact, the table includes a summary of mitigation measure(s) and an indication of whether the impact would be mitigated to a less-than-significant level. Please refer to Chapter 4, Environmental Setting, Impacts, and Mitigation Measures, for a complete discussion of each impact and associated mitigation.

Cumulative effects have been included in the consideration of potential project impacts, as reflected in Table 2-1. Cumulative effects to which the project would contribute include increased demands on public utility and service systems, increases in traffic, and increases in traffic-related air pollutant emissions and noise, among others. The increased cumulative demand on public water supply is considered significant and unavoidable. In addition, the cumulative traffic impact at six study area intersections would be considered significant and unavoidable if the proposed mitigation measures prove infeasible. None of the other cumulative effects are considered significant and unavoidable.

D. ALTERNATIVES TO THE PROJECT

The purpose of the EIR 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. This EIR evaluates alternatives to both the proposed CLRDP and the five near-term projects. Chapter 5, Alternatives, presents detailed descriptions and an analysis of potential impacts of each alternative.

COASTAL LONG RANGE DEVELOPMENT PLAN (CLRDP)

The following five alternatives to the CLRDP are analyzed in detail in this EIR:

- **Reduced Program Alternative.** The net new marine research space developed on the middle and lower terraces would be reduced from 254,500 square feet to approximately 148,000 square feet through reductions in development density and/or the development footprint.
- **Modified Land Use Diagram Alternative.** Development on the upper terrace would be eliminated, the footprint of programmed development on the middle terrace would be altered and increased, and development on the lower terrace would be decreased. The net area of development would be approximately the same as under the proposed CLRDP. Development buffers for wetlands and potential wildlife habitat and habitat corridors would be increased.
- **Increased Program Alternative.** More space would be provided for marine research and education (345,000 square feet), support housing (102,100 square feet), and warehouse and laydown area (143,143 square feet). All other program space would be the same as under the CLRDP. The building program would be about 97,640 square feet larger than the proposed CLRDP. This alternative represents the original development program envisioned for the Marine Science Campus.
- **Project-by-Project Development Alternative.** Development on the campus would not be directed by a CLRDP or Master Plan. Instead, individual projects would be proposed by UCSC or non-UC entities; considered, approved, and developed on a case-by-case basis; and directed by the objectives of each project rather than by programmatic or campus-wide objectives.
- **No Project Alternative.** The CLRDP would not be adopted and no further growth would be planned for the campus. Existing facilities and programs on the campus would continue to operate, with only such population growth as the current facilities can accommodate.

The No Project Alternative would reduce or avoid the potential environmental impacts of CLRDP development and would be the environmentally superior alternative, although it would meet none of the project's primary objectives associated with program development and growth. If the environmentally superior 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 Reduced Program Alternative would be considered environmentally superior, although it would be less effective than the CLRDP in meeting certain project objectives.

NEAR-TERM PROJECTS

In addition to analyzing alternatives to the CLRDP, the EIR considers alternatives to each of the five near-term projects, as follows.

SHARED CAMPUS WAREHOUSE AND LAYDOWN FACILITY

The EIR evaluates the following four alternatives to the proposed Shared Campus Warehouse and Laydown Facility:

- **Reduced Shared Warehouse and Laydown Facility Project Alternative.** Shared warehouse space would be reduced from the proposed 37,500 square feet to about 23,300 square feet, and the shared laydown yard would be reduced from the proposed 70,000 square feet to about 33,000 square feet. Additional paved areas adjoining individual marine research facilities would be developed for equipment storage.
- **Individual Laydown Yards Alternative.** No centralized shared warehouse space and laydown yard would be provided, and the proposed warehouse and laydown project on the upper terrace would not be developed. Warehouse space and laydown yards would be developed adjacent to individual marine research facilities on the middle terrace. Compared to the proposed project, about the same amount of warehouse space and almost 50,000 more square feet in laydown space would be developed.
- **Alternate Shared Warehouse and Laydown Facility Site Alternative.** The 37,500 square feet of warehouse space and the 70,000-square-foot laydown yard would not be developed on the upper terrace, but would instead be located at the middle terrace site proposed in the CLRDP for development of the SORACC. Another site would be identified for the SORACC. Some project-proposed parking areas and research facilities would be reconfigured, and open space in the middle terrace would be reduced.
- **No Project Alternative.** No shared warehouse and laydown facility would be developed on the Marine Science Campus and the upper terrace site would remain undeveloped in the near term. The entities that require warehouse/laydown facilities would provide individual facilities on campus or lease already-developed facilities in the City of Santa Cruz. Since the development of individual facilities is already considered (see Individual Laydown Yards Alternative above), the No Project Alternative is defined as the use of existing space at undetermined off-site locations for warehouse and laydown facility functions.

The No Project Alternative is marginally the environmentally superior alternative but would not meet any of the project objectives. Among the other alternatives, the proposed project is considered the environmentally superior alternative.

42 APARTMENT/TOWNHOUSE UNITS

The EIR evaluates the following three alternatives to the proposed 42 Apartment/Townhouse Units project:

- **Reduced Project Alternative.** A total of 21 housing units would be built at the same middle terrace location proposed by the project, in a single building structure totaling about 22,000 square feet. Housing would be provided only for essential staff and a limited

number of visitors. Housing for most staff, for most visiting and short-term research scientists, and for students would have to be found elsewhere on the Main Campus or in Santa Cruz or other communities.

- **Alternate On-Site Location Alternative.** The proposed 42 housing units would be developed on the upper terrace in a similar configuration as proposed by the project, with the same square footage and height and the same population. The site plan for the Shared Campus Warehouse and Laydown Facility would be revised in order to accommodate additional future housing included on the CLRDP Prototype Site Plan.
- **No Project Alternative.** The proposed 42 apartments and townhouses would not be constructed and the proposed housing site would remain undeveloped. In the near term, no housing would be provided at the Marine Science Campus.

The proposed project is considered the environmentally superior alternative.

SEA OTTER RESEARCH AND CONSERVATION CENTER

The EIR evaluates the following four alternatives to the proposed Sea Otter Research and Conservation Center (SORACC):

- **Reduced SORACC Project Alternative.** The SORACC would be constructed with 6,000 to 7,000 square feet of building space and approximately 15,000 to 20,000 square feet of outside space, to accommodate only the existing research program of the Monterey Bay Aquarium.
- **Alternate Location Alternative.** The proposed 10,000-square-foot SORACC building and the associated 40,000 square feet of outdoor research area would be situated on the middle terrace on the east side of McAllister Way across from CDFG Marine Wildlife Center. The alternative facility would displace other future Marine Research and Education facilities programmed under the proposed CLRDP.
- **Larger SORACC Project Alternative.** Building area would be expanded from the project-proposed 10,000 square feet to 21,000 square feet, and outdoor research area would be reduced from 40,000 square feet to 35,000 square feet. The increased building area would provide more space for administrative offices and sea otter critical-care research and support uses consistent with the needs of the Monterey Bay Aquarium.
- **No Project Alternative.** The proposed SORACC would not be built and the SORACC site would remain in its current state.

The No Project Alternative is the environmentally superior alternative but would not meet any of the project objectives. Among the other alternatives, the proposed project is the environmentally superior alternative.

UNITED STATES GEOLOGICAL SURVEY WESTERN COASTAL AND MARINE GEOLOGY FACILITY

The EIR evaluates the following four alternatives to the proposed United States Geological Survey (USGS) Western Coastal and Marine Geology Facility:

- **Reduced USGS Project Alternative.** An approximately 58,000-square-foot facility containing only laboratory and non-laboratory research facilities would be developed on the proposed site. The USGS administrative, shop, and support space included in the proposed project would be housed either at leased facilities in the Santa Cruz area or at facilities at the USGS compound in Menlo Park.
- **Modified Site Plan Alternative.** The USGS Phase I facility would contain 78,500 square feet as proposed by the project, but the facility would be developed as a single three-story building with a smaller footprint than the proposed project. A portion of the proposed site would remain as open space.
- **Larger USGS Project Alternative.** The entire USGS development program (approximately 203,473 square feet) originally envisioned for the campus would be built. This alternative is considered for its potential to result in similar effects while potentially meeting project objectives to a greater degree than the proposed project.
- **No USGS Project Alternative.** The USGS Phase I facility would not be constructed and the site would remain undeveloped.

The No Project Alternative is the environmentally superior alternative but would not meet any of the project objectives. Among the other alternatives, the proposed project is the environmentally superior alternative.

CENTER FOR OCEAN HEALTH PHASE II

The EIR evaluates the following two alternatives to the proposed Center for Ocean Health (COH) Phase II:

- **Alternate COH Phase II Site Alternative.** The proposed expansion would be located on a site to the east of the existing facility, across McAllister Way from the project-proposed site and more distant from the Younger Lagoon Reserve.
- **No COH Phase II Project Alternative.** The COH Phase II project would not be constructed, COH Phase I would continue to operate within the limits of space and program deficiencies, and the Phase II site would remain undeveloped, at least in the near term. The existing overlook would not be upgraded, and two new overlooks would not be built.

The No Project Alternative is the environmentally superior alternative but would not meet any of the project objectives. Among the other alternatives, the proposed project is the environmentally superior alternative.

E. SUMMARY TABLE

Table 2-1 summarizes all project-related impacts identified during the preparation of this EIR; mitigation measures for those impacts are also described.

TABLE 2-1
SUMMARY OF ENVIRONMENTAL IMPACTS AND MITIGATION MEASURES

Environmental Impact	Mitigation Measures	Significance After Mitigation
A. SIGNIFICANT UNAVOIDABLE IMPACTS		
4.15 Transportation/Traffic		
<p>Impact 4.15-1: The addition of traffic from the short-term development program to the Mission Street / Bay Street intersection would increase the existing volume by 3.1 percent (i.e., more than the 3-percent threshold) at this signalized intersection, which is projected to operate at LOS E during the PM peak hour. The 3-percent threshold would be exceeded at this intersection when the project generates 143 new PM peak hour trips. This would be a significant impact.</p>	<p>General Mitigation Measure 4.15-1: The University shall contribute its fair share (see definition of fair share on page 4.15-33) toward the cost of improvements to the intersection of Mission and Bay Street which would include re-striping the southbound Bay Street approach (which currently includes a left-turn and shared left-turn/through/right lane) to provide a separate right-turn lane, a shared through-left lane, and a left-turn lane. With this improvement, intersection operations would improve to LOS D with 37.7 second of delay in the peak hour.</p>	SU*
<p>Impact 4.15-3: The addition of traffic from the short- and long-term development program to the Mission Street / Bay Street intersection would increase the existing volume by 7.3 percent (i.e., more than the 3 percent threshold) at this signalized intersection, which is projected to operate at LOS E during the PM peak hour under Existing Plus Short- and Long-Term Development Conditions. The 3 percent threshold would be exceeded at this intersection when the project generates 143 new PM peak hour trips. This would be a significant impact.</p>	<p>General Mitigation Measure 4.15-3: Implement General Mitigation Measure 4.15-1.</p>	SU*
<p>Impact 4.15-4: The addition of traffic from the short- and long-term development program to the Mission Street / Chestnut Street intersection would increase the existing volume by 3.8 percent (i.e., more than the 3 percent threshold) at this signalized intersection, which is projected to operate at LOS F under Existing Plus Short- and Long-Term Development Conditions. The 3 percent threshold would be exceeded at this intersection when the project generates 272 new PM peak hour trips. This would be a significant impact.</p>	<p>General Mitigation Measure 4.15-4: The University shall contribute its fair share (see page 4.15-33 for definition of fair share) toward the cost of improvements to the Mission Street/Chestnut Street intersection, which would involve the following modifications: (1) convert the southbound dual right-turn lanes on Mission Street to a single-lane “free” right-turn lane and widen of the west leg of the intersection to accommodate a new 500-foot-long, third lane for merging; or (2) install a triple southbound right-turn lane, which would also require the new merge lane. In both cases, the modifications would require major reconstruction of the intersection, and possibly right-of-way acquisition and building modification/relocation.</p>	SU*

* This impact remains significant and unavoidable because the mitigation may be infeasible and/or the University cannot guarantee its implementation (see Section 4.15 for further discussion).

SU = Significant and Unavoidable

LS = Less than Significant

TABLE 2-1 (Continued)
SUMMARY OF ENVIRONMENTAL IMPACTS AND MITIGATION MEASURES

Environmental Impact	Mitigation Measures	Significance After Mitigation
4.15 <u>Transportation/Traffic</u> (cont.)		
<p>Impact 4.15-5: The entire development program under the CLRDP would cause total traffic volume to increase by between 5.0 and 5.9 percent (i.e., more than the 3-percent threshold) at the signalized Mission Street/Bay Street intersection, which is projected to operate at LOS E and F during the AM and PM peak hours, respectively, under 2020 Baseline Plus Project Conditions. This would be a significant impact.</p>	<p>General Mitigation Measure 4.15-5: Implement General Mitigation Measure 4.15-1.</p>	SU*
<p>Impact 4.15-6: The proposed CLRDP in conjunction with other regional development would cause the AM and PM peak hour traffic to increase significantly at six study intersections, which would reduce the levels of service to unacceptable levels, a significant cumulative impact. This impact would occur both in the short term (2010) and in the long term (2020). The project's contribution to this impact at five of the six affected intersections would be cumulatively considerable.</p>	<p>General Mitigation Measure 4.15-6: Implement General Mitigation Measures 4.15-1 and 4.15-4. In addition, the University shall contribute its fair share (as defined on page 4.15-33) toward the cost of improvements to the intersections at High Street/Western Drive, Empire Grade/Heller Drive, and State Route 1/River Street (SR 9). Mitigation measures include traffic signals at the High Street/Western Drive and Empire Grade/Heller Drive intersections. Potential improvements for the State Route 1/River Street (SR 9) intersection will be identified by the City of Santa Cruz.</p>	SU*
4.16 <u>Utilities, Service Systems, and Energy</u>		
<p>Impact 4.16-1: The CLRDP, in conjunction with other existing development and probable future growth in the service territory of the SCWD, would result in a demand for potable water that would require development of new water supply sources, and the development of these sources could result in significant adverse impacts.</p>	<p>General Mitigation Measure 4.16-1a: All toilets, urinals, showers, and washing machines installed as part of this project shall be specified as low-flush and low-flow in order to reduce onsite water consumption. The University shall install low-flow toilets and urinals that are 1.6 gallon/flush or less and low-flow showers that are 2 gallons per minute (gpm) or less in new development. Further, in all new residential uses washing machines must be certified by the Consortium on Energy Efficiency (CEE) to be water- and energy-efficient (such as those with the Energy Star® label).</p>	SU

* This impact remains significant and unavoidable because the mitigation may be infeasible and/or the University cannot guarantee its implementation (see Section 4.15 for further discussion).

SU = Significant and Unavoidable

LS = Less than Significant

TABLE 2-1 (Continued)
SUMMARY OF ENVIRONMENTAL IMPACTS AND MITIGATION MEASURES

Environmental Impact	Mitigation Measures	Significance After Mitigation
4.16 Utilities, Service Systems, and Energy (cont.)		
Impact 4.16-1: (cont.)	<p>General Mitigation Measure 4.16-1b: If and when the City adopts policies requiring all projects (or all similar institutional or commercial projects) within the water system to offset new water demand or any other water demand reduction policies, the University will consider voluntary compliance with the policy, with appropriate credit being given to account for UCSC's previous water conservation activities (in excess of that accomplished by the similar institutional and/or commercial entities covered by the City policy).</p> <p>General Mitigation Measure 4.16-1c: For projects proposed by non-UC entities on the campus, non-UC entities shall be required, through contracts and agreements, to implement General Mitigation Measure 4.16-1a to minimize water usage.</p> <p>General Mitigation Measure 4.16-1d: The City can and should identify and develop new water supplies to reliably accommodate increases in water supply due to UCSC Marine Science Campus CLRDP-related growth and other background growth during normal and drought conditions.</p>	

SU = Significant and Unavoidable
LS = Less than Significant

TABLE 2-1 (Continued)
SUMMARY OF ENVIRONMENTAL IMPACTS AND MITIGATION MEASURES

Environmental Impact	Mitigation Measures	Significance After Mitigation
B. SIGNIFICANT BUT MITIGABLE IMPACTS		
4.3 <u>Air Quality</u>		
<p>Impact 4.3-1: Construction activities associated with development under the CLRDP could generate substantial amounts of fugitive dust, which would result in potential health and nuisance impacts in the immediate project vicinity. This would be a temporary significant impact.</p>	<p>Project Specific Mitigation Measure 4.3-1: The University shall require construction contractors to implement a dust abatement program to reduce the contribution of project construction to local respirable particulate matter concentrations. Elements of this program shall include the following as appropriate for each project:</p> <ul style="list-style-type: none"> • Water all active construction areas at least twice daily. Frequency shall be based on the type of operation, soil, and wind exposure. • Cover all trucks hauling soil, sand, and other loose materials, or require all trucks to maintain at least two feet of freeboard (i.e., the minimum required space between the top of the load and the top of the trailer). • Pave, apply water two times daily, or apply non-toxic soil stabilizers to all unpaved access roads, parking areas, and construction staging areas. • Sweep daily with water sweepers any paved access roads, parking areas, and staging areas at construction sites. • Sweep streets daily with water sweepers if visible soil material is carried onto adjacent public streets. • Hydroseed or apply (non-toxic) soil stabilizers to inactive construction areas or previously graded areas left inactive for ten days or more. • Enclose, cover, water twice daily or apply (non-toxic) soil stabilizers to exposed stockpiles (dirt, sand, etc.). 	<p>LS</p>

SU = Significant and Unavoidable
LS = Less than Significant

TABLE 2-1 (Continued)
SUMMARY OF ENVIRONMENTAL IMPACTS AND MITIGATION MEASURES

Environmental Impact	Mitigation Measures	Significance After Mitigation
4.3 <u>Air Quality</u> (cont.)		
Impact 4.3-1: (cont.)	<ul style="list-style-type: none"> • Limit traffic speeds on unpaved roads to 15 miles per hour. • Install sandbags or other erosion control measures to prevent silt runoff to public roadways. • Replant vegetation in disturbed areas as quickly as possible. • In the event that grading and excavation at two or more large project sites is proposed to occur concurrently (large sites defined as involving more than 2 acres), install wheel washers at the entrance of the construction sites. • Phase construction projects in such a manner that minimizes the area of surface disturbance (e.g., grading, excavation) and the number of vehicle trips on unpaved surfaces. 	
4.5 <u>Cultural Resources</u>		
Impact 4.5-1: Construction activities associated with development in the upper terrace, middle terrace, and lower terrace development areas could disturb previously undiscovered human burial sites of Native American groups, a potentially significant impact.	Project-Specific Mitigation Measure 4.5-1: If human remains are discovered during the construction of a development project under the CLRDP, the University and/or its employees shall notify the Santa Cruz County Coroner's Office immediately. Upon determination by the County Coroner that the remains are Native American, the Coroner shall contact the California Native American Heritage Commission, pursuant to subdivision (c) of Section 7050.5 of the Health and Safety Code, and the County Coordinator of Indian Affairs and appropriate Native American consultation shall be conducted, as outlined by PRC 5097.98. Implementation Measure 3.9.1, Construction Monitoring, as identified in the CLRDP, shall also apply. UCSC will be responsible for implementing this mitigation measure.	LS

SU = Significant and Unavoidable
LS = Less than Significant

TABLE 2-1 (Continued)
SUMMARY OF ENVIRONMENTAL IMPACTS AND MITIGATION MEASURES

Environmental Impact	Mitigation Measures	Significance After Mitigation
4.7 Hazards and Hazardous Materials		
<p>Impact 4.7-1: Implementation of the CLRDP could increase use of hazardous materials by non-UC entities on campus, which could create hazards to the public or the environment under routine and/or non-routine conditions. This represents a potentially significant impact.</p>	<p>Project-Specific Mitigation Measure 4.7-1: For projects proposed by non-UC entities on campus that involve laboratories, non-UC 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.</p> <ul style="list-style-type: none"> • Non-UC entities shall provide to campus EH&S copies of all required environmental reports to local, state, and federal environmental and safety regulators. • Non-UC entities shall submit the qualifications of designated laboratory directors to UC Santa Cruz EH&S Office prior to commencing laboratory operations. Such documentation shall be in the form of educational and professional qualifications/experience. • Non-UC entities shall submit a copy of applicable regulatory environmental documents prior to commencing on-site research. Applicable documents may include a Hazardous Materials Business Plan, an EPA Hazardous Waste Generator ID Number, a Wastewater Discharge Permit, and air permits regulating fume hood exhaust or emissions from other equipment. Copies of revisions or updates to regulatory documents shall be submitted to EH&S in a timely manner. • Non-UC entities shall submit certification of compliance with NIH biosafety principles to the UC Santa Cruz EH&S Office prior to commencing on-site research or pilot plant manufacturing activities. 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. 	LS

SU = Significant and Unavoidable
LS = Less than Significant

TABLE 2-1 (Continued)
SUMMARY OF ENVIRONMENTAL IMPACTS AND MITIGATION MEASURES

Environmental Impact	Mitigation Measures	Significance After Mitigation
4.7 Hazards and Hazardous Materials (cont.)		
Impact 4.7-1: (cont.)	<ul style="list-style-type: none"> • Non-UC entities shall submit proof of license with Department of Health Services Radiological Health Branch prior to commencing on-site research or pilot plant manufacturing activities involving the use of ionizing radiation or radiation producing machines, or alternatively request to be permitted under UCSC's Radioactive Material License. In either case, Non-UC entities shall submit copies of proposed radioactive material or radiation use protocols to the UCSC Radiation Safety Committee for their review and approval before any radioisotopes or radiation producing machines are brought on site. • 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/Cal-ARP), which discusses the handling and storage of acutely hazardous materials on site. The RMP/Cal-ARP shall be approved by the CUPA and filed with the UC Santa Cruz EH&S Office prior to commencing proposed operations. • Non-UC entities shall submit certification to the UC Santa Cruz EH&S to verify that applicable requirements for handling and disposal of hazardous wastes have been met prior to commencing on-site research or pilot plant manufacturing activities. 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. 	

SU = Significant and Unavoidable
LS = Less than Significant

TABLE 2-1 (Continued)
SUMMARY OF ENVIRONMENTAL IMPACTS AND MITIGATION MEASURES

Environmental Impact	Mitigation Measures	Significance After Mitigation
4.11 Noise		
<p>Impact 4.11-1: Development of the UCSC Marine Science Campus under the CDLRP could locate noise sources and sensitive receptors in close proximity on the campus, creating the potential to expose persons to, or generate, noise levels in excess of noise/land use compatibility standards. This would be a potentially significant impact.</p>	<p>General Mitigation Measure 4.11-1: Prior to developing marine research and education facilities on the middle terrace east of McAllister Way, or additional support housing on the upper terrace, the University shall conduct a project-specific noise analysis. Project-level mitigation measures shall be incorporated into the design of these facilities to reduce potentially significant noise impacts, if necessary.</p>	LS
<p>Impact 4.11-2: Operation of HVAC equipment that is part of the USGS Western Coastal and Marine Geology Facility, if not properly designed, could generate noise levels that exceed the normally acceptable OPR standard at the 42 Apartment/Townhouse Units proposed on the middle terrace.</p>	<p>Project-Specific Mitigation Measure 4.11-2: As part of the design of USGS Western Coastal and Marine Geology Facility, the University shall implement noise control measures in the design of the HVAC systems to reduce the resulting noise levels to 65 DNL or lower at the 42 Apartment/Townhouse units. Control measures for HVAC noise could include, but would not be limited to, the following: use of quiet HVAC models, use of sound barriers around the equipment, and/or orientation of HVAC systems away from sensitive receptors.</p>	LS
<p>Impact 4.11-3: Sound levels generated by delivery activity at the Shared Campus Warehouse and Laydown Facility could potentially affect residents of future campus housing planned for the upper terrace. This could be a potentially significant impact if the residences are located within 75 feet of the Shared Campus Warehouse and Laydown Facility, where they would be exposed to sound levels above the OPR “normally acceptable” noise standard of 65 dBA for multi-family residences.</p>	<p>Project-Specific Mitigation Measure 4.11-3: As part of the design of the Shared Campus Warehouse and Laydown Facility, the University shall implement noise control measures to reduce the resulting noise levels to 65 DNL or lower at future campus housing planned for the upper terrace development area. Control measures incorporated into the design and location of the Shared Campus Warehouse and Laydown Facility may include but not be limited to the following:</p> <ul style="list-style-type: none"> • The University shall orient the warehouse so as to shield noise generated by activity at the Shared Campus Warehouse and Laydown Facility, from potential sites of future campus housing on the upper terrace development area. • The University shall incorporate an easy turn-around for trucks such that they can avoid maneuvering in reverse and thus minimize back-up alarm noise. 	LS

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LS = Less than Significant

TABLE 2-1 (Continued)
SUMMARY OF ENVIRONMENTAL IMPACTS AND MITIGATION MEASURES

Environmental Impact	Mitigation Measures	Significance After Mitigation
<p>4.11 Noise</p> <p>Impact 4.11-3: (cont.)</p>	<ul style="list-style-type: none"> • Once the future campus housing planned for the upper terrace becomes inhabited, the University shall limit noisy outdoor activities (such as those involving the use of heavy equipment) at the warehouse and laydown area from 10:00 PM to 6:00 AM all days of the week. • The University shall construct a wall around the laydown area, consistent with CLRDP guidelines, to attenuate noise levels at future campus housing planned for the upper terrace development area. The wall shall be completed before the future campus housing planned for the upper terrace is occupied. 	
<p>Impact 4.11-4: Noise generated by construction activity under the CLRDP may substantially increase noise levels at nearby sensitive receptors, resulting in temporary and localized noise impacts. This would be a potentially significant impact.</p>	<p>General Mitigation Measure 4.11-4: Prior to the initiation of construction, the University shall approve a construction noise mitigation program including but not limited to the following:</p> <ul style="list-style-type: none"> • The University shall require that construction activities be limited to a schedule that minimizes disruption to noise-sensitive uses on the project site and in the vicinity through implementation of the following: <ul style="list-style-type: none"> – Construction activities during daytime and evening hours (7:00 AM to 10:00 PM) shall not occur within 150 feet of sensitive receptors, when feasible. Construction activities within 500 feet of sensitive receptors activities shall not occur during nighttime hours (10:00 PM to 7:00 AM). – Whenever possible, academic and administrative staff, as well as residents who will be subject to construction noise, shall be informed one week before the start of each construction project. – Loud construction activity as described above within 150 feet of an academic or residential use shall, to the extent feasible, be scheduled during holidays, spring break, or summer break. 	LS

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LS = Less than Significant

TABLE 2-1 (Continued)
SUMMARY OF ENVIRONMENTAL IMPACTS AND MITIGATION MEASURES

Environmental Impact	Mitigation Measures	Significance After Mitigation
<p>4.11 <u>Noise</u> Impact 4.11-4: (cont.)</p>	<ul style="list-style-type: none"> • To reduce noise impacts from construction, the University shall require that construction contractors muffle or otherwise control noise from construction equipment through implementation of the measures below. The effectiveness of these measures is quantified in Table 4.11-4 above. <ul style="list-style-type: none"> – Internal combustion engines used for any purpose at the construction sites shall be equipped with a muffler of a type recommended by the manufacturer. – Equipment used for construction shall utilize the best available noise control techniques (e.g., improved mufflers, equipment redesign, use of intake silencers, ducts, engine enclosures, and acoustically-attenuating shields or shrouds, wherever feasible); – Impact tools (e.g., jack hammers, pavement breakers, and rock drills) used for construction shall be hydraulically or electrically powered wherever feasible to avoid noise associated with compressed air exhaust from pneumatically powered tools. However, where use of pneumatic tools is unavoidable, an exhaust muffler on the compressed air exhaust shall be used. Such mufflers can lower noise levels from the exhaust as much as 10 dBA. External jackets on the tools themselves shall be used where feasible, and this could achieve a reduction of 5 dBA. Quieter procedures such as using drilling equipment rather than impact equipment shall be implemented whenever feasible. – Stationary noise sources shall be located as far from sensitive receptors as feasible. If they must be located near sensitive receptors, they shall be muffled to the extent feasible and/or, where practicable, enclosed within temporary sheds. 	

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 LS = Less than Significant

TABLE 2-1 (Continued)
SUMMARY OF ENVIRONMENTAL IMPACTS AND MITIGATION MEASURES

Environmental Impact	Mitigation Measures	Significance After Mitigation
4.11 Noise		
Impact 4.11-4: (cont.)	<ul style="list-style-type: none"> • The University shall require that a temporary wooden wall be placed around construction activity areas that are within 150 feet of sensitive receptors to provide additional noise attenuation, where feasible. The wall should impede the direct line of site between the noise sources and sensitive receptors. • The University shall require that construction-related material haul trips access the campus via Natural Bridges Drive and Delaware Avenue in order to minimize noise exposure to residential land uses. • The University shall identify potential noise impacts related to construction of long-term projects proposed under the CLRDP, and develop project-specific noise mitigation measures as may be necessary. The University shall take into account the location of the five campus facilities that will have been developed in the near-term as well as off-campus developments nearby. The analysis shall also take into account the sequence in which long-term projects are to be constructed and shall identify appropriate mitigation, as may be required. These future facilities may be sensitive receptors or may act as barriers to noise approaching other sensitive receptors. 	
Impact 4.11-5: Noise generated by nighttime construction of the Shared Campus Warehouse and Laydown Facility could potentially exceed the 70 dBA Leq threshold at nearby residents along Shaffer Road and north of the railroad tracks. This is a potentially significant impact.	Project-Specific Mitigation Measure 4.11-5: The University shall require that construction contractors limit construction activity for the Shared Campus Warehouse and Laydown Facility to the hours between 7:00 AM and 10:00 PM all days of the week.	LS

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LS = Less than Significant

TABLE 2-1 (Continued)
SUMMARY OF ENVIRONMENTAL IMPACTS AND MITIGATION MEASURES

Environmental Impact	Mitigation Measures	Significance After Mitigation
<p>4.11 Noise</p> <p>Impact 4.11-6: Noise generated by the construction of the USGS Western Coastal and Marine Geology facility would exceed the 80 dBA Leq threshold at the 42 Apartment/ Townhouse Units that are also proposed for the near-term development on the middle terrace. This potentially significant impact would only occur if the 42 Apartment/ Townhouse Units are developed and occupied before construction of the USGS facility.</p>	<p>Project-Specific Mitigation Measure 4.11-6: If the 42 Apartment/Townhouse Units are developed and occupied before construction of the USGS Western Coastal and Marine Geology facility, the University shall require that construction contractors implement the following measures:</p> <ul style="list-style-type: none"> • Contractors shall notify all residents of the 42 Apartment/Townhouse Units that will be subject to construction noise from the development of the USGS facility one week before the start of construction activity. • To the extent feasible, loud construction activity (i.e., jackhammering, concrete sawing, asphalt removal, and large-scale grading operations) within 150 feet of the 42 Apartment/Townhouse Units shall occur during daytime hours (7:00 AM to 5:00 PM). • To reduce noise impacts from construction, contractors shall muffle or otherwise control noise from construction equipment through implementation of the measures below. <ul style="list-style-type: none"> – Internal combustion engines used for any purpose at the construction sites shall be equipped with a muffler of a type recommended by the manufacturer. – Equipment used for construction shall utilize the best available noise control techniques (e.g., improved mufflers, equipment redesign, use of intake silencers, ducts, engine enclosures, and acoustically-attenuating shields or shrouds, wherever feasible); 	LS

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TABLE 2-1 (Continued)
SUMMARY OF ENVIRONMENTAL IMPACTS AND MITIGATION MEASURES

Environmental Impact	Mitigation Measures	Significance After Mitigation
<p>4.11 <u>Noise</u> Impact 4.11-6: (cont.)</p>	<ul style="list-style-type: none"> - Impact tools (e.g., jack hammers, pavement breakers, and rock drills) used for construction shall be hydraulically or electrically powered wherever feasible to avoid noise associated with compressed air exhaust from pneumatically powered tools. However, where use of pneumatic tools is unavoidable, an exhaust muffler on the compressed air exhaust shall be used. Such mufflers can lower noise levels from the exhaust as much as 10 dBA. External jackets on the tools themselves shall be used where feasible, and this could achieve a reduction of 5 dBA. Quieter procedures such as using drilling equipment rather than impact equipment shall be implemented whenever feasible. - Stationary noise sources shall be located as far from sensitive receptors as feasible. If they must be located near sensitive receptors, they shall be muffled to the extent feasible and/or, where practicable, enclosed within temporary sheds. • The University shall require contractors to install a temporary wooden wall around construction activity areas that are within 150 feet of inhabited residences to provide additional noise attenuation, where feasible. The wall should impede the direct line of site between the noise sources and first floor sensitive receptors. 	

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LS = Less than Significant

TABLE 2-1 (Continued)
SUMMARY OF ENVIRONMENTAL IMPACTS AND MITIGATION MEASURES

Environmental Impact	Mitigation Measures	Significance After Mitigation
C. LESS THAN SIGNIFICANT IMPACTS FOR WHICH MITIGATION MEASURES ARE PROPOSED		
4.2 <u>Agricultural Resources</u>		
<p>Impact 4.2-1: With the inclusion of CLRDP policies and implementation measures, development under the CLRDP would not result in substantial pressures that could lead to the conversion of adjacent Farmland to other uses. The impact is therefore considered less than significant.</p>	<p>General Mitigation Measure 4.2-1:</p> <ul style="list-style-type: none"> • UCSC will install a four-foot-high landscaped fence along the Younger Ranch property line that will extend from the bend in the existing access road, northward along the property line. The fence will be sited and constructed to have a uniform gap of 16 inches between a smooth wire defining the bottom of the fence and the ground. This will assure that wildlife passage can continue to occur through the fence. • UCSC will install tree and shrub landscaping approximately 25 feet inside the fence (to minimize shading effects on Younger Ranch crops), consisting of an indigenous, drought-resistant mosaic of mid-level shrubs and taller trees to help dissipate dust generation from the west. Tree and shrub choices will be made in conjunction with the landscape architect experienced in the use of native plants and vegetation. Trees and shrubs will be selected for non-invasive character. Native blackberries are recommended, as they would serve as an access barrier. • UCSC will install the fence and landscaping prior to groundbreaking of any CLRDP project components. 	<p>LS</p>

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LS = Less than Significant

TABLE 2-1 (Continued)
SUMMARY OF ENVIRONMENTAL IMPACTS AND MITIGATION MEASURES

Environmental Impact	Mitigation Measures	Significance After Mitigation
4.4 Biological Resources		
<p>Impact 4.4-1: Implementation of the CLRDP would not affect CLRF breeding habitat and would avoid impacts on dispersing CRLF by setting development back from off-site areas where the species has previously been observed. The impact on the species would be considered less than significant.</p>	<p>Project-Specific Mitigation Measure 4.4-1: For all projects proposed in the upper terrace under the CLRDP, the University will implement the following:</p> <ul style="list-style-type: none"> • A preconstruction survey for CRLF will be conducted of all areas proposed for grading and construction by a qualified biologist, approved by the USFWS. If CRLF are observed, grading activities shall be postponed and USFWS shall be consulted to determine appropriate actions to avoid impact. Consultation with the USFWS will result in either a determination of the need to obtain a permit or in the identification of measures to avoid take of the individual(s). • The biological monitor shall also conduct meetings with the contractor(s) and other key construction personnel to describe the importance of the species, the need to restrict work to designated areas, and to discuss procedures for avoiding harm or harassment of wildlife encountered during construction. 	LS
<p>Impact 4.4-2: Development on, and restoration of, annual grassland and coastal scrub on the middle and upper terrace development zones could cause a loss of nesting raptors that may be present, primarily through the direct effects of ground disturbance and the indirect effects of increased human activity and noise. Because raptor nesting records are limited for the site, and due to abundant alternate and protected habitat in the region, the probability of this impact is low and the degree of impact is considered less than significant.</p>	<p>Project Specific Mitigation Measure 4.4-2: UCSC shall ensure that construction activities avoid disturbing nests of raptors (and other special-status birds). If ground-disturbing activities are scheduled to occur during the breeding season (February 1 through August 31), the following measures are required to avoid potential adverse effects on nesting special-status raptors and other birds:</p> <ul style="list-style-type: none"> • A qualified wildlife biologist will conduct preconstruction surveys of all potential nesting habitat. For burrowing owls, such surveys will follow the most recent CDFG <i>Burrowing Owl Survey Protocol and Mitigation Guidelines</i>. 	LS

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LS = Less than Significant

TABLE 2-1 (Continued)
SUMMARY OF ENVIRONMENTAL IMPACTS AND MITIGATION MEASURES

Environmental Impact	Mitigation Measures	Significance After Mitigation
4.4 <u>Biological Resources</u> (cont.)		
Impact 4.4-2: (cont.)	<ul style="list-style-type: none"> If active raptor nests are found during preconstruction surveys, a no-disturbance buffer acceptable in size to CDFG will be created around active raptor nests and nests of any other special-status birds during the breeding season, and maintained until it is determined that all young have fledged. Raptor or other bird nests initiated during construction are presumed to be unaffected, and no buffer is necessary. However, the “take” of any individuals will be prohibited. If preconstruction surveys indicate that nests are inactive or potential habitat is unoccupied during the construction/restoration period, no further mitigation is required. Trees and shrubs that have been determined to be unoccupied by special-status birds or that are located outside the no-disturbance buffer for active nests may be removed. 	
Impact 4.4-3: Construction of expanded seawater system facilities could cause a direct loss of nesting black swift not now known to nest, but with the potential to do so in any given year, an adverse but less than significant impact.	<p>Project Specific Mitigation Measure 4.4-3: UCSC will ensure that construction/operation activities avoid disturbing nests of black swift. If construction activities are scheduled to occur during the breeding season (June 1 through September 30), the following measures will be implemented to avoid potential adverse effects:</p> <ul style="list-style-type: none"> UCSC will conduct pre-construction surveys to determine presence of active black swift nests within the project area. Published literature suggests that the optimal survey time is the final two hours of daylight, when chick provisioning rates may increase and adults are returning to the colony to roost. Targeting surveys for the last hours of daylight should also maximize the probability of counting breeding as opposed to nonresident foraging individuals. If active nests are found during preconstruction surveys, UCSC will delay construction until after fledging occurs. If preconstruction surveys indicate that nests are inactive or potential habitat is unoccupied, no further mitigation is required. 	LS

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TABLE 2-1 (Continued)
SUMMARY OF ENVIRONMENTAL IMPACTS AND MITIGATION MEASURES

Environmental Impact	Mitigation Measures	Significance After Mitigation
4.15 <u>Transportation / Traffic</u>		
<p>Impact 4.15-2: The addition of project-generated pedestrians to Delaware Avenue could result in an increase in hazards by increasing the potential for pedestrian conflicts with vehicles and bicyclists. This impact would occur on the 900-foot portion of the north side of Delaware Avenue when there is no sidewalk. Due to low level of pedestrian activity, the impact is considered less than significant.</p>	<p>General Mitigation Measure 4.15-2: UCSC will contribute its fair-share (see page 4.15-33 for definition of fair share) towards construction of a separate pedestrian path on the north side of Delaware Avenue from Shaffer Road to the existing sidewalk west of Natural Bridges Drive. This improvement could be as simple as installing a raised asphalt curb approximately five to six feet away from the existing curb or edge of pavement with openings to maintain existing drainage. Design and construction of this improvement to close the existing gap in pedestrian facilities in this area can and should be completed by the City of Santa Cruz since Delaware Avenue is under its jurisdiction.</p>	<p>LS</p>

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LS = Less than Significant

B. FORMAT OF THE FINAL ENVIRONMENTAL IMPACT REPORT

The UCSC Marine Science Campus CLRDP Final EIR Response to Comments Document consists of five sections, and is organized as follows:

Section 1, Introduction. Provides general information relevant to the understanding and use of this document.

Section 2, Summary of Impacts and Mitigation Measures. Presents the summary of impacts and mitigation measures, as identified in the Draft EIR.

Section 3, Revisions to the Draft EIR. Contains all changes to the text, figures and references in the Draft EIR based on internal review and public and agency comments. This section is provided so that readers may readily review adjustments that have been made to the project and the analysis since publication of the Draft EIR.

Section 4, Responses to Comments. Includes a list of all agencies, organizations and individuals that submitted comments on the Draft EIR during the public review period. This section also includes the comment letters followed by responses to written comments, and transcripts from the public hearing and responses to verbal comments received at the hearing. Each letter/transcript and each comment within a letter/transcript has been numbered. Responses are assigned corresponding numbers. Where appropriate, responses are cross-referenced.

Section 5, Mitigation Monitoring Program. Describes monitoring and reporting procedures, monitoring responsibilities, and monitoring schedules for mitigation measures identified in the EIR analysis of the environmental effects of the CLRDP as a whole, as well as the measures included in the CLRDP to avoid or minimize environmental effects.

CHAPTER 3

REVISIONS TO THE DRAFT EIR

A. FORMAT OF TEXT CHANGES

Text changes are intended to clarify or correct information in the Draft EIR in response to comments received on the document or as initiated by the Lead Agency (University) staff. Revisions are indicated as excerpts from the Draft EIR text, with a ~~line through~~ deleted text and an underline beneath inserted text.

B. TEXT CHANGES

This section includes revisions to text, by Draft EIR section. The changes appear in order of their occurrence in the Draft EIR.

CHAPTER 1: INTRODUCTION AND CHAPTER 2: SUMMARY

In response to comment SA-3-85, the third sentence in the fourth paragraph of page 1-1, and the third sentence of the third paragraph on page 2-1, are revised to read as follows:

The Draft CLRDP was published in July 2003, and an editorially revised version of the Draft CLRDP was published in January 2004.

Page 2-3, fourth sentence of the last paragraph is revised as follows:

In addition, the cumulative traffic impact at six study area intersections would be considered significant and unavoidable if the proposed mitigation measures proves infeasible.

Page 2-24, Table 2-1, the bullet under the column heading “Mitigation Measures” is deleted.

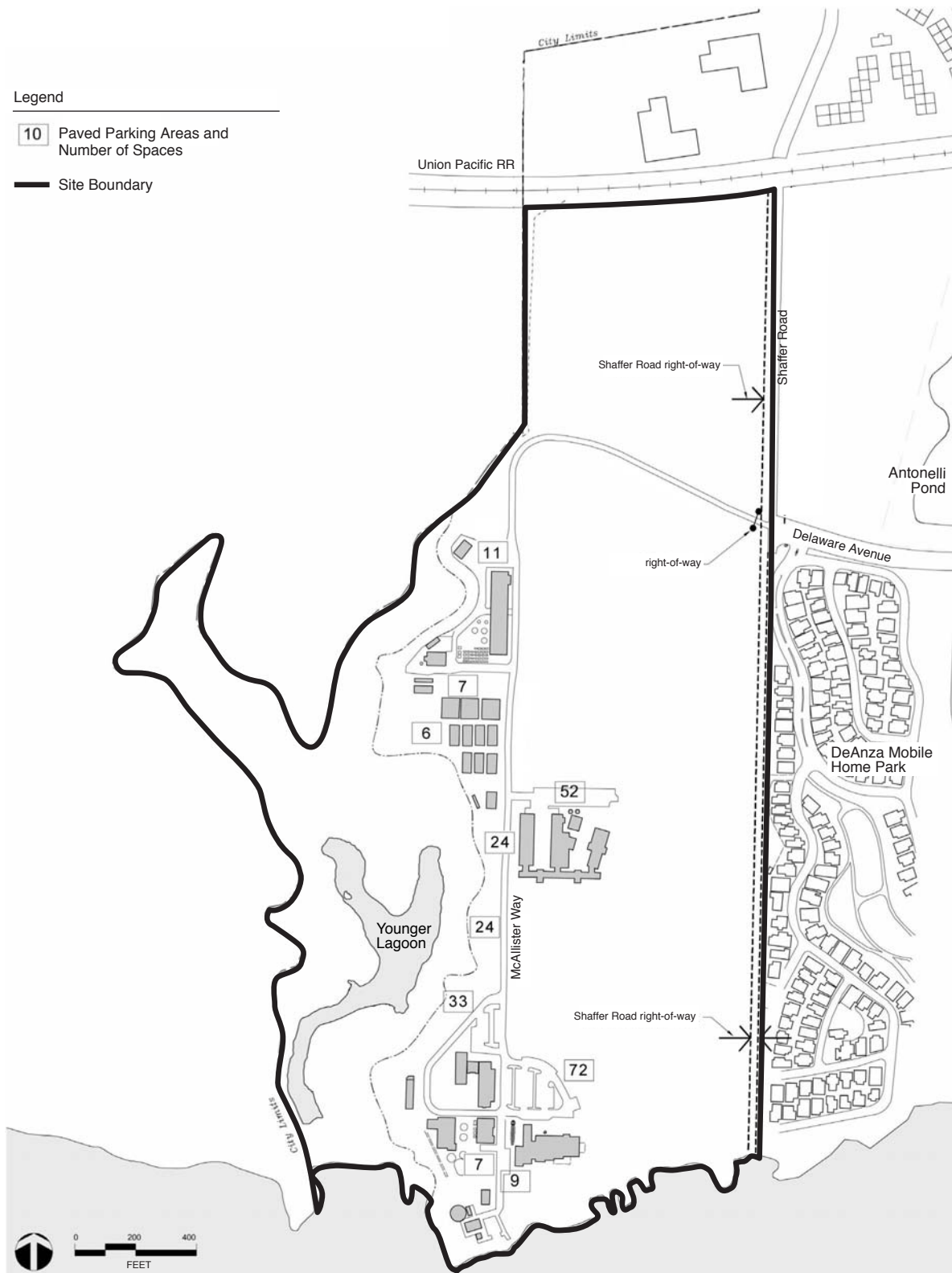
CHAPTER 3: PROJECT DESCRIPTION

As noted in response to comment SA-3-86, Figure 3-3 on page 3-7 incorrectly shows the right-of-way centered on the centerline of the existing roadway. Figure 3-3 is revised to correct this error. Draft EIR Figures 3-4 through 3-8 are also revised to correct this error and are shown on the following pages. In addition, Figure 3-5 is revised to correct a spelling error.

Legend

10 Paved Parking Areas and Number of Spaces

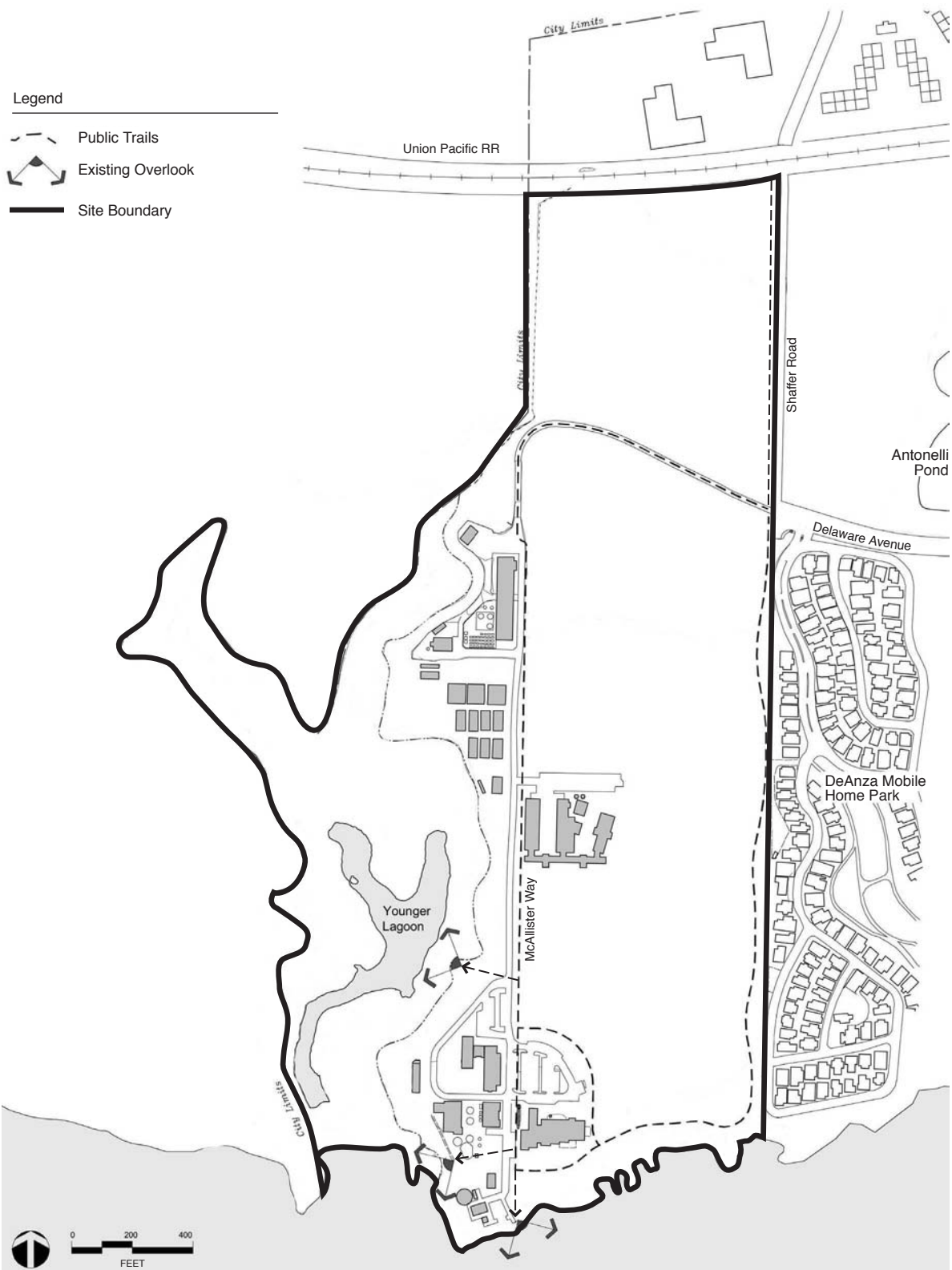
— Site Boundary



SOURCE: Draft CLRD

UCSC Marine Science Campus CLRD Final EIR / 200385 ■

Figure 3-3
Existing Onsite Roads and Parking



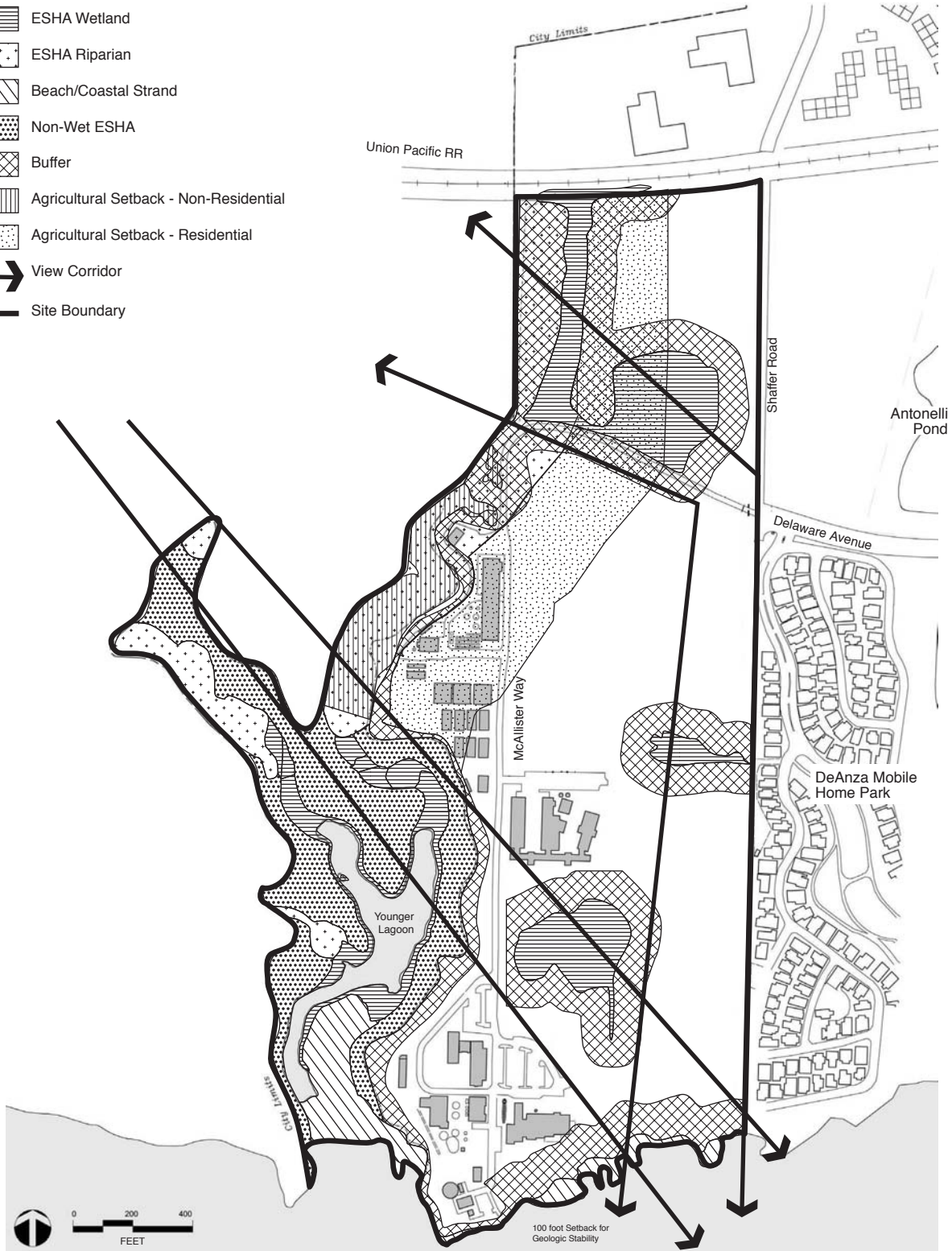
SOURCE: Draft CLRDP

UCSC Marine Science Campus CLRDP Final EIR / 200385 ■

Figure 3-4
Existing Public Access and Overlooks

Legend

-  ESHA Wetland
-  ESHA Riparian
-  Beach/Coastal Strand
-  Non-Wet ESHA
-  Buffer
-  Agricultural Setback - Non-Residential
-  Agricultural Setback - Residential
-  View Corridor
-  Site Boundary









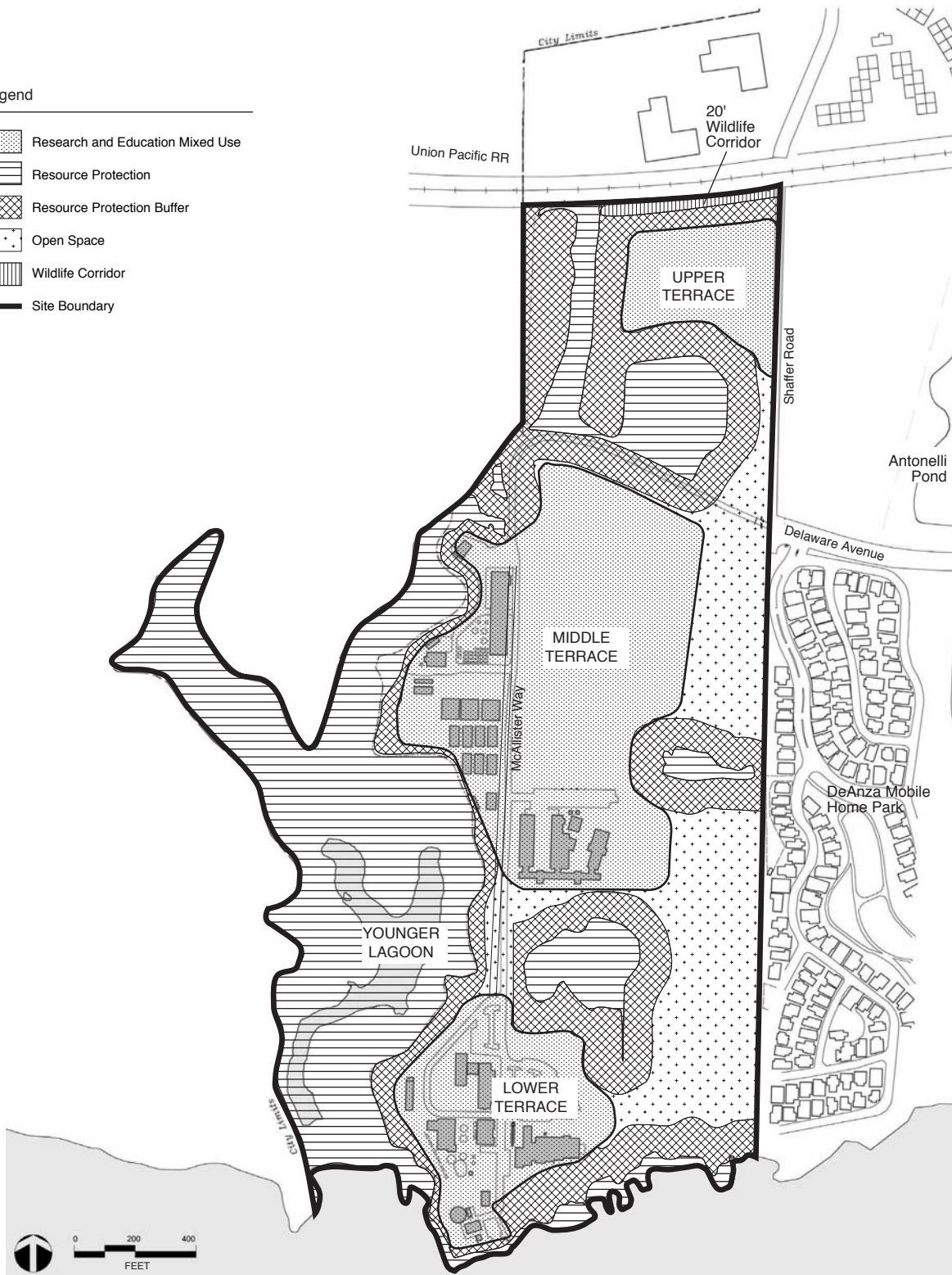
SOURCE: Draft CLRDP

UCSC Marine Science Campus CLRDP Final EIR / 200385 ■

Figure 3-5
Combined Development Constraints Onsite

Legend

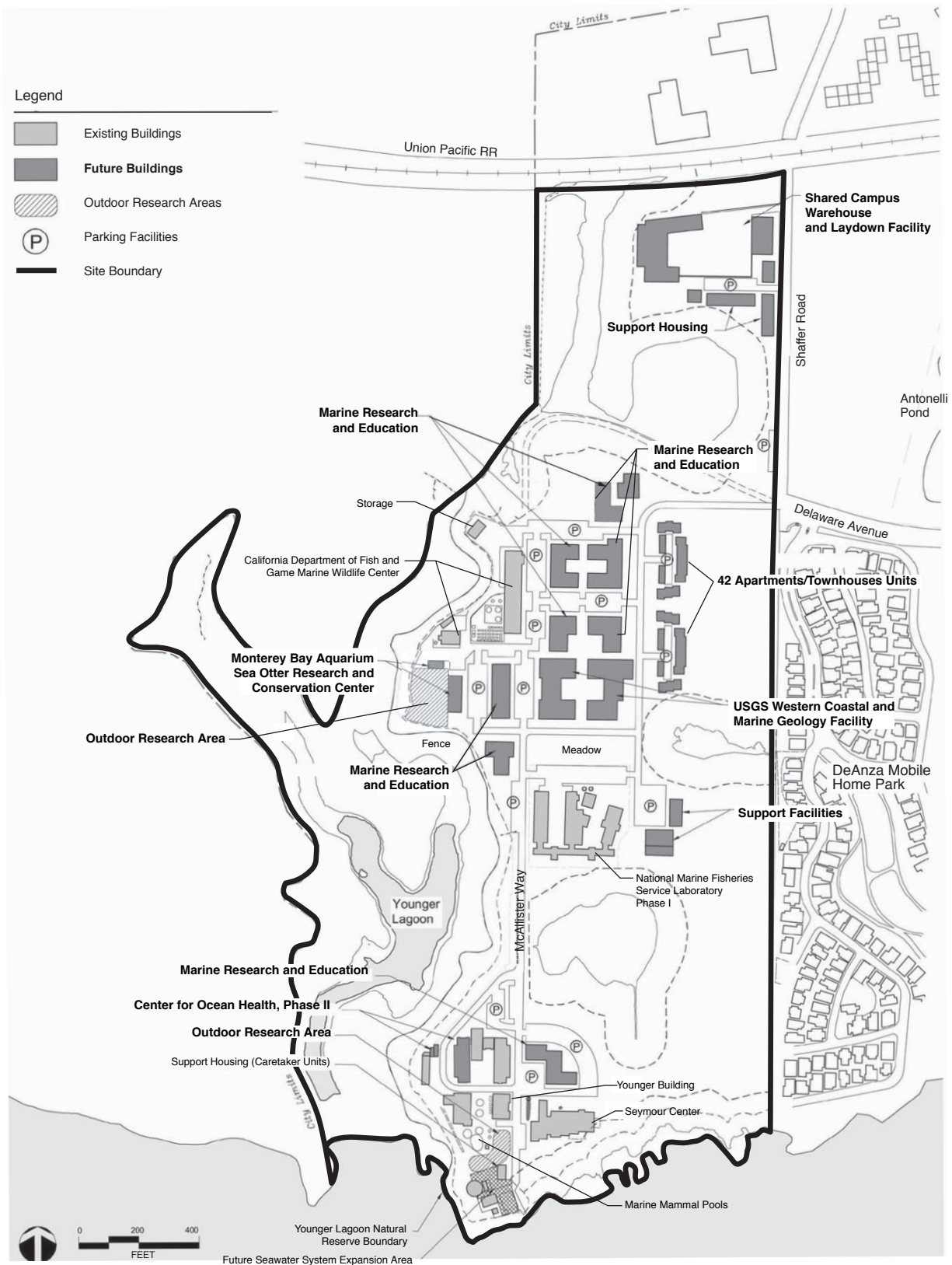
-  Research and Education Mixed Use
-  Resource Protection
-  Resource Protection Buffer
-  Open Space
-  Wildlife Corridor
-  Site Boundary



SOURCE: Draft CLRDP

UCSC Marine Science Campus CLRDP Final EIR / 200385 ■

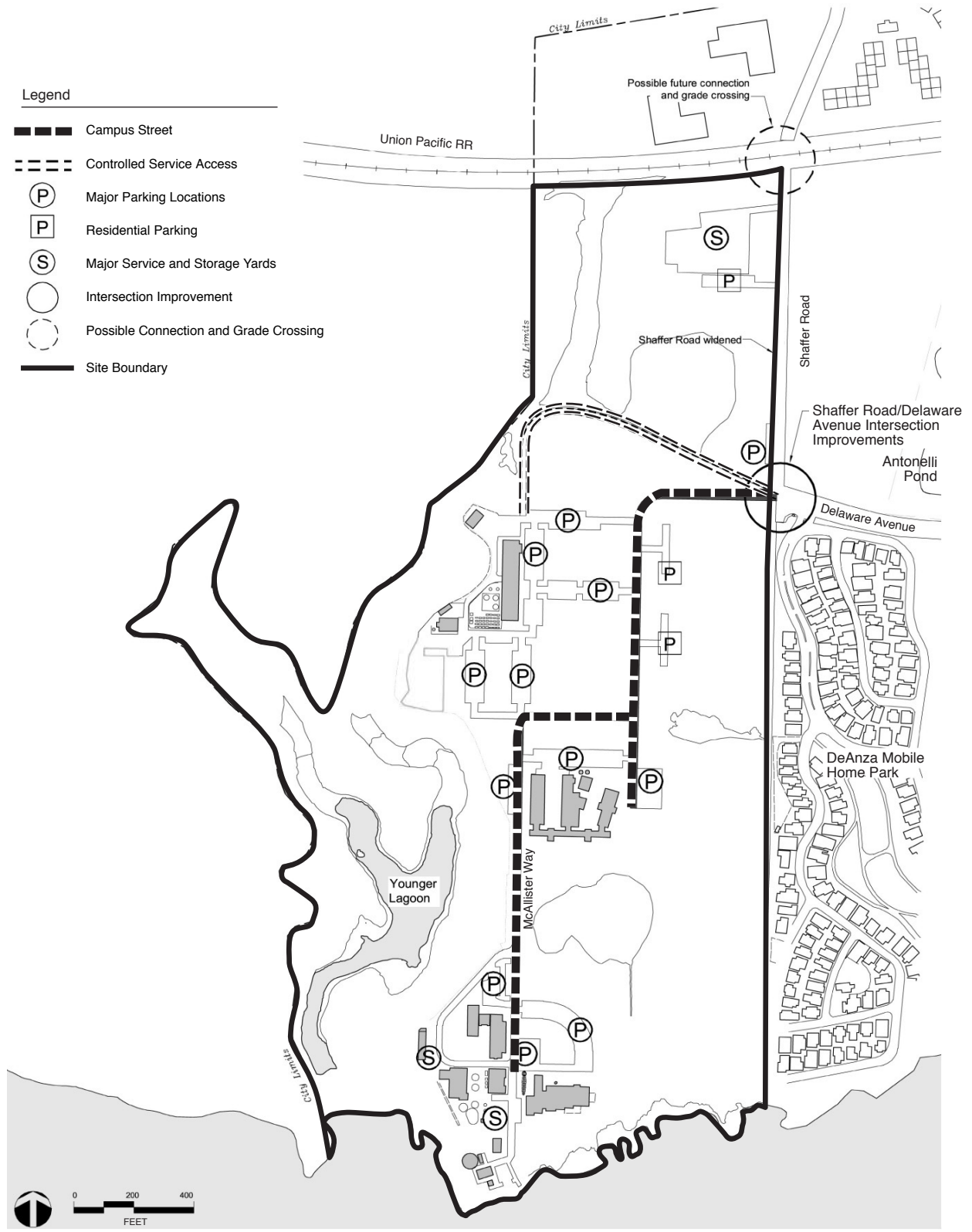
Figure 3-6
CLRDP Land Use Diagram



SOURCE: Draft CLRDP

UCSC Marine Science Campus CLRDP Final EIR / 200385 ■

Figure 3-7
CLRDP Prototype Site Plan



SOURCE: Draft CLRD

UCSC Marine Science Campus CLRD Final EIR / 200385 ■

Figure 3-8
 Circulation and Parking Diagram

Page 3-27, first sentence of the first full paragraph is revised as follows:

To promote bicycle use and walking, the University would provide secure bicycle racks outside major building complexes and lockers and showers in a convenient, central location, and would work with the City of Santa Cruz to identify and market bike routes to the campus.

In response to comment SA-3-22, Figure 3-9 on page 3-28 is revised to show the correct trail configuration as shown on page 3-9.

In response to comment SA-3-18, Figure 3-10 on page 3-31 is revised to show the correct location of the corridor as shown on page 3-10.

CHAPTER 4: ENVIRONMENTAL SETTING, IMPACTS AND MITIGATION MEASURES

Page 4-3, second sentence of the second paragraph is revised as follows:

Although the planning horizon for the CLRDP is 2024, that is, about 20 years from approval, impact analyses in this EIR assume that full development under the CLRDP would occur by 2020.

SECTION 4.1: AESTHETICS

In response to comment SA-3-23, the last sentence in the first full paragraph on page 4.1-30 is revised as follows:

Public trails onsite would be designed according to intended use,⁵ with larger widths (up to 12 feet wide) and low-level pedestrian lighting designated for major pedestrian trails, and narrower widths (a minimum of ~~6~~5 feet wide to ensure ADA compliance) and no night lighting provided unless needed for safety, designated for minor visitor use trails.

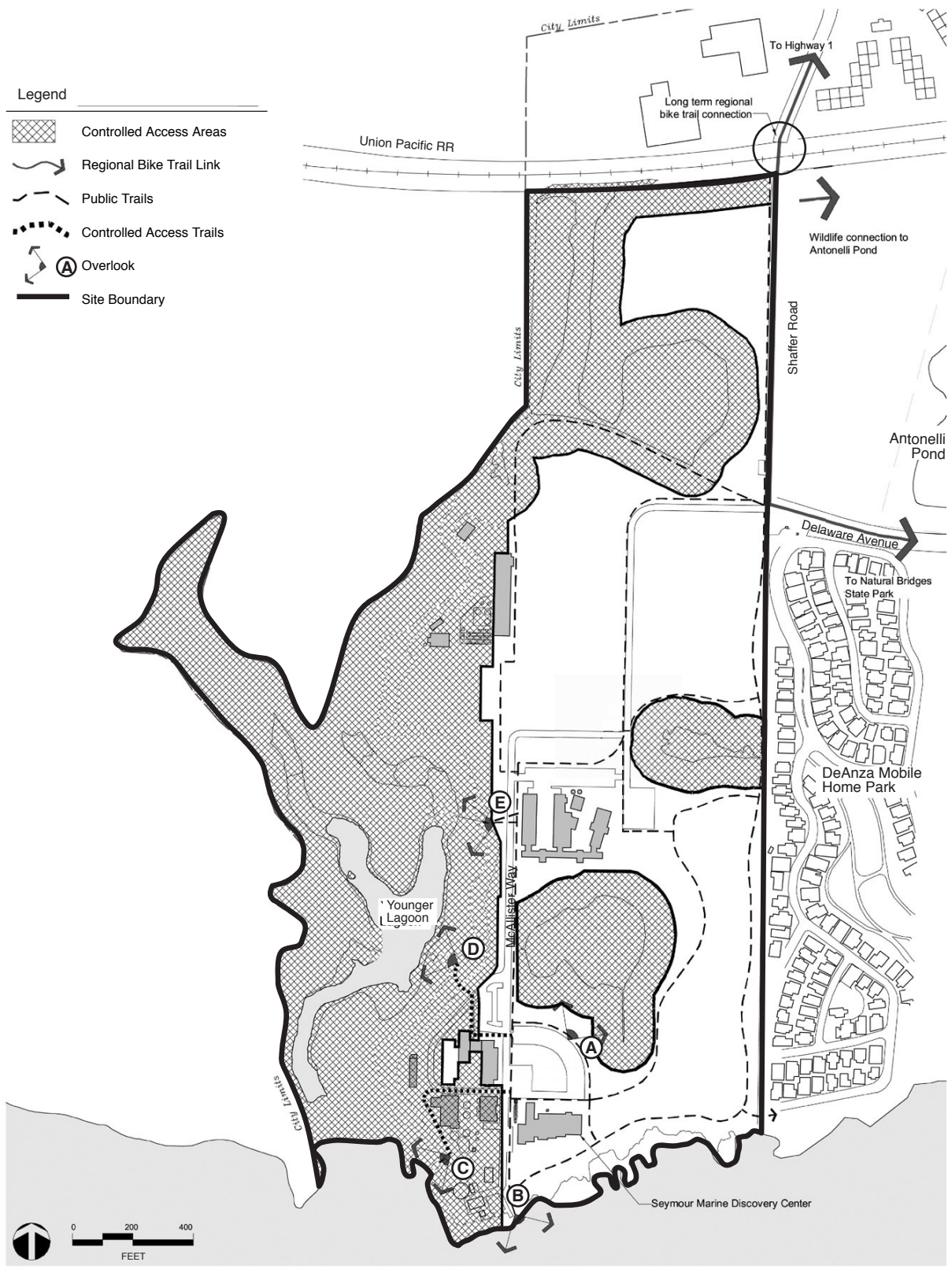
Page 4.1-31, third paragraph, the second period after the third sentence is deleted.

SECTION 4.2: AGRICULTURAL RESOURCES

Page 4.2-13, last sentence of the second paragraph is revised as follows:

In summary, the conversion of this land to non-agricultural uses and the removal of the greenhouses would not result in a significant impact.

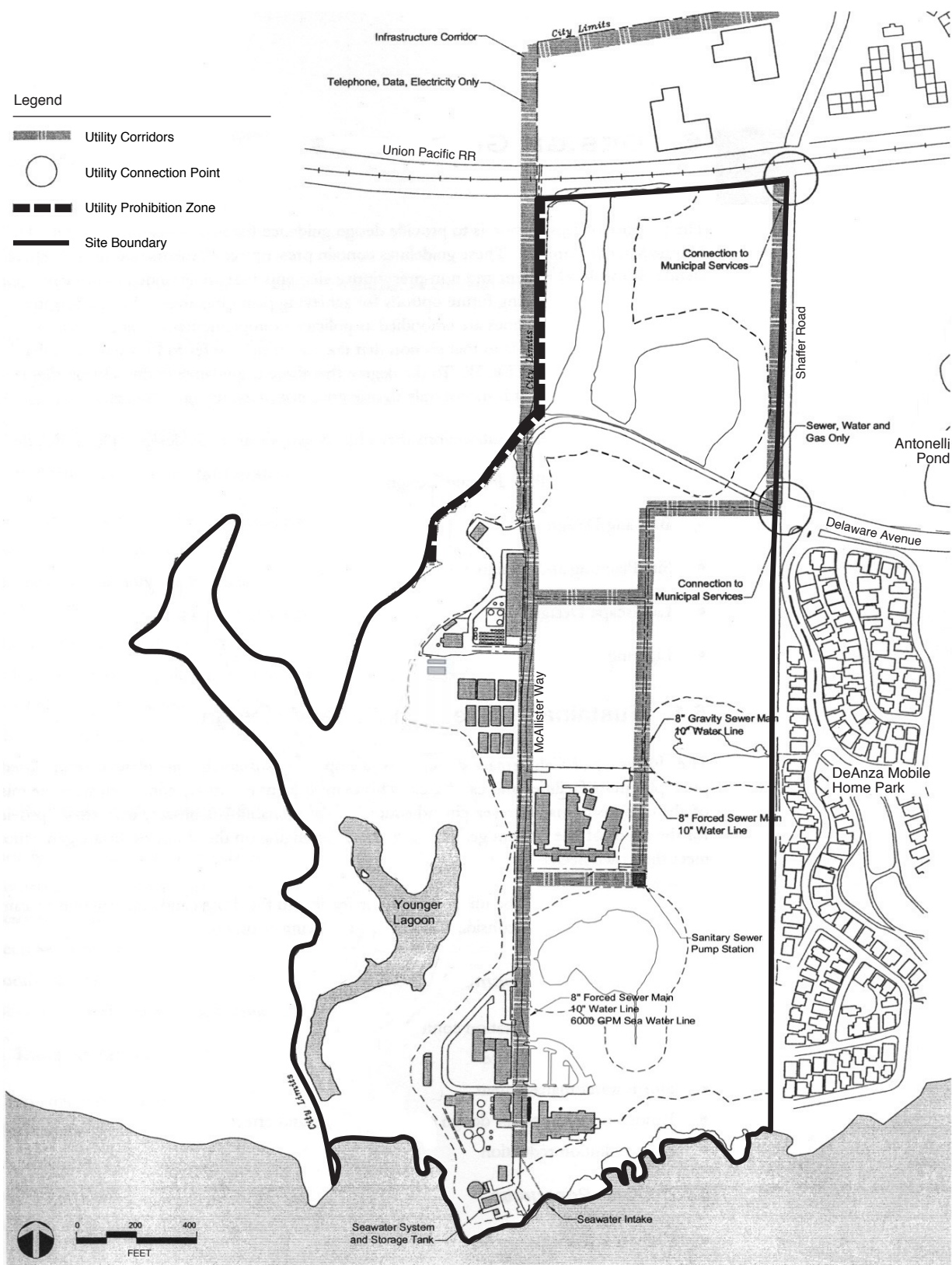
⁵ The CLRDP public trails design guidelines state that walks and trails on campus have two primary uses: daily use by site faculty, staff, and students to access site facilities; and visitor use for coastal access, docent-led tours, and informal interpretive walks.



SOURCE: Draft CLRDP

UCSC Marine Science Campus CLRDP Final EIR / 200385 ■

Figure 3-9
Coastal Access and Recreation Diagram



SOURCE: Draft CLRD

UCSC Marine Science Campus CLRD Final EIR / 200385 ■

Figure 3-10
 Utilities Diagram

SECTION 4.3: AIR QUALITY

Page 4.3-21, Table 4.3-6 is revised as shown on page 3-11.

**TABLE 4.3-6
ESTIMATED CARBON MONOXIDE CONCENTRATIONS AT SELECTED
INTERSECTIONS IN PROJECT VICINITY (IN PARTS PER MILLION)^a**

Intersection	Existing + Near-term Projects^b	Existing + CLRDP Development^b	Year 2020 + CLRDP Development
#11 Mission St. and Bay St.			
1-hour	6.26	6.38	7.42
8-hour	3.69	3.78	4.51
#16 State Highway 1/Chestnut St. and Mission St.			
1-hour	8.57	8.79	10.79
8-hour	5.11	5.26	6.67
#19 Western Dr. and Empire Grade Rd./High St.			
1-hour	4.36	4.36	4.68
8-hour	2.16	2.17	2.39
#22 Bay St. and Escalona Dr.			
1-hour	4.55	4.56	5.09
8-hour	2.30	2.30	2.68
#24 Empire Grade and Heller Dr.			
1-hour	4.40	4.42	4.88
8-hour	2.19	2.20	2.53
#11 Mission St. and Bay St.			
— 1 hour	6.26	6.38	7.42
— 8 hour	3.69	3.78	4.51

^a All values are parts per million (ppm) of carbon monoxide. The State one-hour carbon monoxide standard is 20 parts per million (ppm) and the corresponding federal standard is 35 ppm. The State and federal eight-hour carbon monoxide standard is 9.0 ppm.

^b Eight-hour concentrations were derived from one-hour concentrations by applying a 0.7 persistence factor to the local carbon monoxide increment.

^c The scenarios for “Existing + Near-term Projects” and “Existing + CLRDP Development,” by definition, will not actually occur. They show the project’s influence on future CO concentrations in comparison to cumulative growth and development not related to the project; they are hypothetical. The “Existing + Near-term Projects” scenario presents CO concentrations if the near-term projects were to be developed and no additional traffic related to other projects in the area was to occur. Similarly, the “Existing + CLRDP Development” scenario presents CO concentrations if full CLRDP development were to occur and no additional traffic related to other projects in the area were to occur.

SOURCE: Environmental Science Associates, 2003.

Page 4.3-22, second paragraph is revised as follows:

~~Six-Five~~ intersections were selected from the 24 analyzed in the traffic section (Section 4.15) for the potential to exceed CO standards based on the criteria in the MPUAPCD *CEQA Air Quality Guidelines*. These ~~six-five~~ intersections would experience the highest traffic volumes or be most affected by CLRDP development. The MBUAPCD CO screening model was used to evaluate worst-case concentrations at these ~~six-five~~ intersections and the screening results are shown below in Table 4.3-6.

Page 4.3-25, the “Cumulative Impacts – Emissions of Carbon Monoxide” section was repeated in the Draft EIR; the second section is deleted as shown below:

~~CUMULATIVE IMPACTS – EMISSIONS OF CARBON MONOXIDE~~

~~Entire Development Program~~

~~Increased traffic congestion on roadways and intersections generated by cumulative growth through 2020 in addition to full development under the CLRDP has the potential to generate high localized levels of CO. Development under the CLRDP through 2020 would have a cumulatively considerable air quality impact if it would result in a violation of CO concentration thresholds at individual intersections in conjunction with implementation of cumulative growth and development in the area. The MBUAPCD CO screening model was used to evaluate worst-case concentrations at the intersections most affected by development under the CLRDP and cumulative development.~~

~~Table 4.3-6 above shows the estimated CO concentrations caused by the CLRDP and cumulative development in the column headed “Year 2020 + CLRDP Development.” As indicated by the results in Table 4.3-6, CO concentrations with addition of traffic generated by the CLRDP and cumulative development would remain below State and federal ambient standards and therefore would not result in a cumulatively considerable significant air quality impact.~~

~~Near-term Projects~~

~~None of the near-term projects would result in a violation of CO concentration thresholds at individual intersections beyond those levels analyzed above for the CLRDP in Table 4.3-6.~~

SECTION 4.4: BIOLOGICAL RESOURCES

Page 4.4-5, footnote 4 is revised as follows:

- 4 California Department of Fish and Game, “List of California terrestrial natural communities recognized by the Natural Diversity Data Base,” <http://www.dfg.gov/whdab/natcomlist.pdf> (May 2002).

Page 4.4-12, second sentence of the second paragraph is revised as follows:

Within two miles of the project site, the California Natural Diversity Data Base¹⁵ reports 22 records of plants and animals that have special status.

Page 4.4-12, footnote 16 is revised as follows:

16 Internet address <http://www.santacruzbirdclub.org>

Page 4.4-44, first paragraph is revised as follows:

Wetland W1 (~~Agricultural-Historic Drainage Ditch~~). This drainage feature flows due south in an artificial ditch along the western boundary of the terrace area, then turns southwest opposite the sharp curve in the entrance road and flows into the eastern arm of Younger Lagoon. The ditch was used to prevent inundation and allow cultivation in the northern portion of the property. Arroyo willow is scattered along the margins of the ditch, along with willow herb, and weedy non-native species, such as curly dock (*Rumex crispus*). This feature is subject to California Coastal Act wetland protection policies and CDFG jurisdiction under Section 1600 – 1607 of the Fish and Game Code.

Page 4.4-50, footnote 73 is revised as follows:

73 Dechant, J. A., M. L. Sondreal, D. H. Johnson, L. D. Igl, C. M. Goldade, M. P. Nenneman, and B. R. Euliss. “Effects of management practices on grassland birds: Northern Harrier,” Northern Prairie Wildlife Research Center, Jamestown, ND. <http://www.npwr.usgs.gov/resource/literatr/grasbird/noha/noha.htm>~~harrier/harrier.htm~~ (Version 17FEB2000), 2001.

In response to comment SA-3-7, the first sentence under paragraph three on page 4.4-51 is revised as follows:

1. “Within the upper terrace development area, habitat types include ruderal (~ 0.3 acre), non-native grasslands (~ 2 acres), coyote brush scrub-grassland (~ 2 acres) and ~~two~~ one small wetland (totaling ~~63~~ 43 sf).”

Page 4.4-60, first sentence of the first paragraph is revised as follows:

In addition to the implementation measures summarized above from the ~~elrdp-CLRDP~~ and the ~~rmp-RMP~~, two scenic and visual resource policies would contribute to protecting biological resources.

Page 4.4-62, Impact 4.4-1 is revised as follows:

Impact 4.4-1: Implementation of the CLRDP would not affect ~~CLRF-CRLF~~ breeding habitat and would avoid impacts on dispersing CRLF by setting development back from off-site areas where the species has previously been observed. The impact on the species would be considered less than significant.

¹⁵ California Department of Fish and Game (CDFG), “California Natural Diversity Data Base” for 7.5 minute topographic quadrangle Santa Cruz. Information dated June 2002.

Page 4.4-65, Impact 4.4-2 is revised as follows:

Impact 4.4-2: Development on, and restoration of, annual grassland and coastal scrub on the middle and upper terrace development zones could cause a ~~lost~~ loss of nesting raptors that may be present, primarily through the direct effects of ground disturbance and the indirect effects of increased human activity and noise. Because raptor nesting records are limited for the site, and due to abundant alternate and protected habitat in the region, the probability of this impact is low and the degree of impact is considered less than significant.

Page 4.4-65, last paragraph is revised as follows:

Black Swift. Black swift would be sufficiently distant and shielded from disturbances caused by most development that impacts would generally be less than significant. However, the CLRDP proposes to expand the current seawater system on the lower terrace portion of the site to accommodate ~~an additional~~ a total system capacity of 6,000 gallons per minute capacity. Construction and/or operation of the expanded seawater system has the potential to disrupt nesting black swift, if present. Given the relative scarcity of suitable nesting habitat and the sensitivity and rarity of the species, disruption of nesting could be a significant impact according to the significance criteria listed at the beginning of this chapter.

Page 4.4-68, sixth sentence of the second paragraph is revised as follows:

The CLRDP provisions referenced above (Policy 3.2 and Implementation Measures 3.4.1, 4.4.1 and 4.4.3~~2~~) apply to YLR.

SECTION 4.6: GEOLOGY AND SOILS

Page 4.6-20, fifth paragraph is revised as follows:

CLRDP Implementation Measure ~~3.7.12-12.1~~, Bluff Setbacks, would maintain a setback of 100-feet from bluffs for buildings and facilities along the coastal bluff in recognition of potential coastal cliff erosion and slope failure during an earthquake. The setbacks prescribed in Implementation Measure ~~3.7.12-12.1~~ would reduce the potential for seismically-induced ground failure and ensure that impacts related to seismically-induced slope failure are less than significant.

Page 4.6-20, second sentence of the sixth paragraph is revised as follows:

The proposed near-term projects are located on flat building areas, away from the coastal and YLR bluffs and outside the setbacks prescribed by Implementation Measure ~~3.7.12-12.1~~.

Page 4.6-22, last sentence of the first full paragraph is revised as follows:

The setbacks prescribed in Implementation Measure ~~3.7.12-12.1~~ would reduce the potential for hazards related to construction on unstable geologic unit such as a eroding sea cliff or a bluff overlying a sea cave and would ensure that impacts related to unstable geologic units are less than significant.

Page 4.6-22, third sentence of the second paragraph is revised as follows:

The proposed near-term development under the CDLRP, therefore, maintains the required 100-foot setback for buildings and facilities along the coastal bluffs, as required in Implementation Measure ~~3.7.12.12.1~~.

SECTION 4.8: HYDROLOGY AND WATER QUALITY

Page 4.8-13, first sentence of the third paragraph is revised as follows:

The seawater is used for keeping and growing a variety of organisms including marine mammals, invertebrates, fish, marine algae, and other organisms that are subjects of scientific or educational study or commercial production.

Page 4.8-32, third sentence of the fourth paragraph is revised as follows:

This would be accomplished by constructing a series of detention facilities that would be designed to detain flows and release them at pre-development rates and volumes.

SECTION 4.9: LAND USE AND PLANNING

Page 4.9-3, first full sentence of the first paragraph of Draft EIR page 4.9-3 is revised as follows:

Additionally, General Plan policy sets forth the types and intensity of development that should occur on the site, including 25 acres of coastal-dependent/related uses, 6.5 acres along the coast for coastal recreation, at least 15 acres of housing and supporting uses, parks in accordance with City standards, and community gardens.

Page 4.9-10, the fourth bullet is revised as follows:

- The University will limit utility capacity as set forth in Implementation Measure 2.1.1 in order to assure that public service and facility expansions and non-agricultural development do not impair agricultural viability (Implementation Measure ~~2.1.12.14.3~~, Agricultural Setbacks).

Page 4.9-12, the following heading is revised as follows:

CONFLICT WITH AN APPLICABLE HCP OR HNCCP

In response to comment SA-3-21, the summary of three related Coastal Act access policies beginning on page 4.9-15 of the Draft EIR is modified to include the word “maximum” after “provide.”

- Provision of Adequate Public Access. Provide maximum public access from the nearest public roadway to the shoreline and along the coast in new development projects except where:

In response to comment SA-3-39, page 4.9-16, paragraph 8 is revised as follows:

Historic Access to the Project Site. As discussed in Section 4.14, ~~with the exception of the Seymour Center, which is a recreational and educational destination that attracts visitors, there are no formally established access trails or recreational uses on the project site. As discussed in more detail below, however,~~ As part of an access program in the interim before adoption of the CLRDP, the Coastal Commission has designated public-access trails through the terrace portion of the site and to overlook areas ~~on an interim basis.~~ The Commission has also recognized that ~~There is observational and anecdotal evidence that portions of the terrace, including informal trails, overlooks, and McAllister Way, have been used in the past (and currently) by the general public for walking, bicycling, and viewing the ocean. In addition, surfers have been observed occasionally climbing down the bluff face to the beach below, although land owner permission for this use has not been granted and no established accessway to the sea exists. There are no formally designated trails that currently exist onsite.~~ No formal access to the beach below has been provided to date due to safety concerns and the potential harm to biological resources at ~~the~~-YLR.

In response to comment SA-3-35, the Draft EIR is modified (page 4.9-18, after paragraph 1) to incorporate the following discussion of establishing public access to the beach and surfing area by means of a stairway down the face of the bluff.

“The CLRDP does not include provision for public access either to the beach in the lagoon area or to the pocket beaches at the foot of the bluff. Both of these routes to the beach potentially provide access to the surfing break offshore Younger Beach. The CLRDP policies reflect Coastal Act policies in providing for maximum public access to coastal resources of the Marine Science Campus to the extent consistent with public safety and fragile coastal resources, among other constraints.

“As discussed elsewhere (page 4.9-1 of the Draft EIR), public access in the Younger Lagoon Reserve area would not be consistent with protection of the reserve’s sensitive habitat resources.

The possibility of an access stairway down the face of this 35-foot seacliff raises different issues. Some bluff-face stairways have successfully provided public access to the ocean, but a partially sheltered location is needed for the safety of persons using the stairway as well as protection of the structure itself. For example, the stairway at Pleasure Point in Santa Cruz is located on the southeast face of a promontory, providing substantial protection from ocean waves. Other bluff-face stairways in the area are located either in similar sheltered locations or are separated from dangerous wave action by a broad beach.

“At the Marine Science Campus, the near-vertical, south-facing cliffs are exposed to the direct impact of ocean waves as the small pocket beaches at the bluff toe become inundated at high tides. Even in the absence of a stairway, persons climbing on the face of these cliffs occasionally have become stranded by a rising tide, requiring rescue. Introducing a stairway at this location would expose more people to the hazards of being stranded on a disappearing beach or ascending steep and possibly damaged stairs while being buffeted by ocean waves.

“A stairway would also bring more climbers to the cliff face, possibly impairing the habitat value of the area. The bluff face is designated “resource protection,” where the primary purpose is protection of wetland and ESHA values. The coastal bluffs provide habitat for nesting birds, including the special status black swift (*Cypseloides niger*). See Draft EIR pages 4.4-10, 4.4-27, 4.4-33, 4.4-41 - 42. Introduction of a bluff-face structure and increased public presence in this sensitive area would not be consistent with implementation measures included in the CLRDP to protect the bluff environment. Draft EIR page 4.4-59.

“As discussed below, there is abundant provision for public access to the sea in this area. Surfers and beach-goers can safely access the beach at Natural Bridges, about 800 yards east of the Marine Science Campus, and at most tide stages, it is possible to walk from there to Younger Beach for access to the surfing break. In this way, the surfing areas offshore the Marine Science Campus can be reached more safely than by means of a bluff stairway.

“Considering the hazards of a bluff stairway, the priority for protection of sensitive lagoon and bluff resources, the adequacy of nearby alternative access to the coast, and the onsite provisions for other coastal access and recreational amenities, the omission of access to the site beaches is consistent with Coastal Act policies.”

In response to comment SA-3-79, second paragraph, sixth sentence on page 4.9-35 is revised as follows:

Additionally, to protect the bluffs from increased erosion and the need for protective devices, native coastal bluff vegetation would be expanded and enhanced onto the terrace, ~~and~~. These provisions would effectively ensure that no development that would require a coastal protection structure (e.g., seawall) would be allowed on the lower terrace.

Page 4.9-39, Table 4.9-1, third paragraph under the column heading “Project Consistency” is revised as follows:

Consistent. Blufftop trails viewing areas overlooking the ocean and wetlands, and docent-led tours would be provided, augmenting coastal recreational opportunities available at nearby locations such as Wilder Ranch State Park, Natural Bridges State Beach.

In response to comment SA-3-79, Table 4.9-1, page 4.9-44, second paragraph in third column (project consistency with Section 30253), fifth sentence is revised as follows:

Protective structures or other devices that would alter natural landforms along the bluffs would not be ~~allowed~~ necessary under the CLRDP.

SECTION 4.11: NOISE

Page 4.11-3, the following heading is revised as follows:

PERMENANT-PERMANENT INCREASE IN AMBIENT NOISE LEVELS

Page 4.11-13, Table 4.11-2, the title is revised as follows:

ESTIMATED EXISTING WEEKDAY PM PEAK-HOUR TRAFFIC NOISE LEVELS ALONG ROAD SEGMENTS NEAR THE UCSC MARINE SCIENCE CAMPUS

SECTION 4.12: POPULATION AND HOUSING

Page 4.12-9, footnote 15 is revised as follows:

- 15 Undergraduates are much more likely than graduate students to live in the city of Santa Cruz. While 87 percent of undergraduates live in the city of Santa Cruz (including on the UCSC campus), only ~~one-third (33 percent)~~ two-thirds (66 percent) of graduate students live in the city, including those living on campus. Compared to undergraduates and to faculty and staff, graduate students are more dispersed beyond Santa Cruz County. ~~A high percentage of graduate students live in Santa Clara County (34 percent), 12 percent live in Monterey County, 10 percent live in San Mateo and San Francisco Counties, and 3 percent live in Marin County~~

Page 4.12-23, last two sentences of the first paragraph are revised as follows:

However, not all of the incremental population associated with UCSC Main Campus not accounted for in the 1997 AMBAG projections; would ~~not~~ be “new” to the area as some of the employees and students would already be living in the city and other Santa Cruz County communities, and furthermore not all the new population would live in Santa Cruz County. Using the current patterns of residence of UCSC population as basis, about 87 percent of this incremental population (about 5,764 persons) would reside within the County and the rest would live in ~~other adjacent neighboring~~ counties.

SECTION 4.15: TRANSPORTATION / TRAFFIC

In response to comment SA-3-41, the text in the second paragraph on page 4.15-15 is revised as follows:

A Class I multiuse/bicycle path follows the shoreline along West Cliff Drive, and a separate Class I facility links Shaffer Road to Wilder Ranch.

Page 4.15-55, Table 4.15-14, the title is revised as follows:

2010 BASELINE PLUS SHORT-TERM PROJECT INTERSECTION LEVELS OF SERVICE (LOS)

Page 4.15-70, second sentence of the second paragraph is revised as follows:

This volume would be the highest tolerable volume for any residents living on the west or east side of Shaffer Road, but would not necessitate any additional capacity beyond a typical two-lane collector street configuration.

In response to comment SA-3-41, Figure 4.15-4 on page 4.15-16 is revised to include the Class I path linking Shaffer Ranch to Wilder Ranch as shown on page 3-20.

SECTION 4.16: UTILITIES, SERVICE SYSTEMS, AND ENERGY

Page 4.16-2, fifth sentence of the first full paragraph is revised as follows:

At this time, the City is focusing primarily on desalinization options.

In response to comment LA-2-2, Table 4.16-3 on Draft EIR page 4.16-10 is revised as shown page 3-21.

Page 4.16-15, the second paragraph is deleted as shown below:

~~Although RRF has adequate capacity to serve the CLRDP waste generation under the CLRDP and the above impact is considered to be less than significant, the following project specific mitigation measures are included to assist the University in achieving its waste diversion targets and to reduce the overall waste it diverts to the RRF landfill. Implementation of the following measures would establish an integrated framework for recycling and waste disposal activities at the Marine Science Campus that would accommodate waste generated by new construction and campuswide population growth projected in the CLRDP.~~

Page 4.16-17, ninth sentence of the second paragraph is revised as follows:

In summary, cumulative development in the service area, including the CLRDP, would require that new resources be developed to serve the projected demand for water, and the development of a new source of water could potentially result in one or more significant environmental impacts.

CHAPTER 5: ALTERNATIVES

Page 5-4, fourth sentence of the first paragraph under Section C, Range of Alternatives, is revised as follows:

It would also contribute substantially to a significant and unavoidable cumulative impact associated with increased demand on the water supply and to a significant cumulative impact from increased traffic at ~~six~~five intersections.

Page 5-17, Figure 5-1 is revised to correct the error associated with the Shaffer Road right-of-way as shown on page 3-22.

Page 5-31, fourth paragraph is revised as follows:

If the environmentally superior alternative is the No Project Alternative, CEQA Guidelines Section 15126(d)(2) requires that the EIR shall identify another alternative as environmentally superior.



Key:

- Bike Path (Class I)
- Bike Lane (Class II)
- Bike Lane (Class III)
- Pacific Coast Bicycle Route (Class Varies)

SOURCE: Fehr & Peers

UCSC Marine Science Campus CLRDP Final EIR / 200385 ■

Figure 4.15-4
Bikeways

**TABLE 4.16-3
ANTICIPATED WATER DEMAND AND WASTEWATER GENERATION
ENTIRE DEVELOPMENT PROGRAM**





Building Element	Size (sf)	Unit	Rate gpd ^a	Future Water Demand (gpd)	Future Wastewater generation (gpd) ^b
USGS Phase I	78,500	sf	0.1	7,850	7,065
USGS Phase II	50,000	sf	0.1	5,000	4,500
Other Marine Research Buildings	43,000	sf	0.1	4,300	3,870
NMFS Phase II	30,000	sf	0.1	3,000	2,700
Greenhouses (to be removed)	-26,844	sf	N/A	-987	-888
Future UCSC Buildings	25,000	sf	0.1	2,500	2,250
Center for Ocean Health Phase II	18,000	sf	0.1	1,800	1,620
SORACC	6,000	sf	0.1	600	540
350-Seat Seminar Auditorium	5,000	seat	5.0	1,750	1,575
Meeting Rooms	2,500	sf	0.1	250	225
Dining	3,500	100 meals	50.0	5,000	4,500
Office Trailers (to be removed)	-3,000	sf	0.1	-600	-540
80 Units Housing	82,000	sf	0.2	16,400	14,760
30 Dormitory Rooms	12,000	60 beds	60	3,600	3,240
10 Visitor/Overnight Accommodations	2,500	20 beds	130.0	2,600	2,340
Caretaker Replacement Housing	1,600	bed	100.0	1,600	1,440
Caretaker Housing (to be removed)	-1,400	bed	100.0	-1,400	-1,260
Centralized Warehouse	37,500	employee	110.0	990	891
Subtotal				54,253	48,828
Plus Existing water use (from Table 4.16-1)				17,958	
Total				72,211	

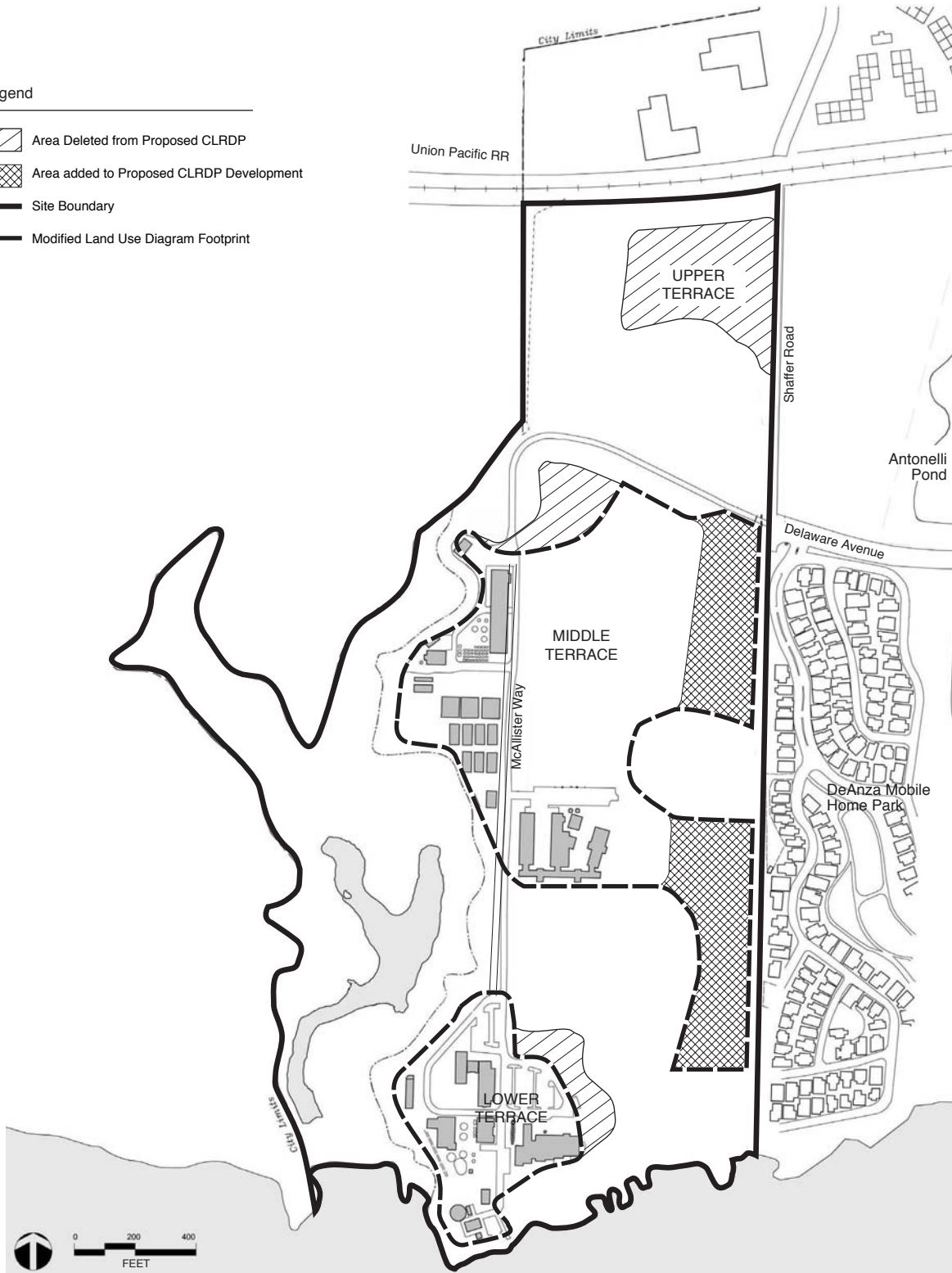
^a Rates for Marine Research and Education facilities are based on the average consumption at existing LML buildings, which generally equate to about 0.1 gpd per sf of building area.

^b Future wastewater generation is derived by multiplying the estimated water demand by 90 percent.

SOURCES: BMS Design Group, ESA, Mesiti-Miller Engineering, UCSC Office of Planning and Construction, 2003

Legend

-  Area Deleted from Proposed CLRDP
-  Area added to Proposed CLRDP Development
-  Site Boundary
-  Modified Land Use Diagram Footprint



SOURCE: Draft CLRDP

UCSC Marine Science Campus CLRDP Final EIR / 200385 ■

Figure 5-1
Modified Land Use Diagram Alternative

CHAPTER 9: BIBLIOGRAPHY

In response to comment SA-3-85, the 19th bibliographic reference on page 9-9 is added as follows:

UC Santa Cruz, "Marine Science Campus Coastal Long Range Development Plan,"
January 2004

CHAPTER 4

RESPONSES TO COMMENTS TO THE DRAFT EIR

A. INTRODUCTION

Following the close of the circulation period for the UCSC Marine Science Campus CLRDP Draft EIR, a total of 18 written comment letters were received. In addition, verbal comments were received from eight commenters at the public hearing. The complete text of the written and verbal comments, and the University of California’s response to those comments, is presented in this chapter. A copy of each comment letter is followed by its response(s), and the transcript for the Public Hearing, followed by its response, is found thereafter. Written comments have been assigned codes starting with the letters “SA” for all state agencies, “LA” for all local agencies, “O” for organizations and groups, and “I” for individuals. Each written comment letter is assigned a number, and specific comments within each comment letter are individually numbered. Therefore, individual comments are coded SA-1-1, SA-1-2, and so forth. With respect to verbal comments at the public hearing, all comments are marked with the letter “PH” followed by a number identifying the commenter, and a number identifying the specific comment in the transcript. Verbal comments therefore are coded PH-1-1, PH-1-2, and so forth.

B. INDEX TO COMMENTS

Commenter Code	Agency/Organization/Individual – Name
SA-1	Department of Transportation – Schaeffer, Chris
SA-2	Monterey Bay Unified Air Pollution Control District – Brennan, Janet
SA-3	California Coastal Commission – Carl, Dan
LA-1	AMBAG – Papakakis, Nicholas
LA-2	City of Santa Cruz – Wilson, Richard C.
LA-3	Santa Cruz County Regional Transportation Commission – Wilshusen, Linda
ORG-1	California Native Plant Society – Hayes, Kimberly
ORG-2	Sierra Club – Fravel, Marilyn
ORG-3	Terrace Point Action Network – Curry, Renwick E., PhD, and Knudegard, Nancy C.
I-1	Watershed Systems – Curry, Robert R.

Commenter Code	Agency/Organization/Individual – Name
I-2	Individual – Davidson, Edward
I-3	Individual – Davidson, Edward J.
I-4	Individual – Elders, Barney
I-5	Individual – Fusari, Margaret H.
I-6	Individual – Gray, Leda Beth
I-7	Individual – Johnson, Randa
I-8	Individual – Perkins, Mike
I-9	Individual – Swenson, R.B.
PH-1	Individual/Public Hearing – Davidson, Ed
PH-2	Individual/Public Hearing – Roth, Victor
PH-3	Individual/Public Hearing – Curry, Renwick
PH-4	Individual/Public Hearing – Hayes, Grey
PH-5	Individual/Public Hearing – Hayes, Kim
PH-6	Individual/Public Hearing – Giacchino, Aldo
PH-7	Individual/Public Hearing – Swenson, Ron
PH-8	Individual/Public Hearing – Croll, Don

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March 19, 2004

SCR-001-various
SCH# 2001112014

John Barnes
Environmental Assessment Group
University California Santa Cruz
515 Swift Street
Santa Cruz, CA 95060

SUBJECT: UCSC Marine Science Campus CLRDP draft EIR Comments

Dear Mr. Barnes:

The California Department of Transportation (Department) District 5 has reviewed the Draft Environmental Impact Report (EIR) for the proposed Marine Science Campus Long Range Development Plan for the University of California Santa Cruz (UCSC). The project sets forth a development plan out to the year 2020. District 5 staff offers the following comments for your consideration:

- 1) The University is commended for committing to participate with the City of Santa Cruz's efforts to improve various intersections on Route 1 (Mission St) in the effort to mitigate this project's transportation impacts, both project specific and cumulative. 1
- 2) The above comment notwithstanding, we remain concerned with the continued use of the City's "3% increase in trips" criterion for determining the significance of traffic impacts. This application does not appear to be consistent with the following CEQA court cases: *Kings County Farm Bureau v. City of Hanford (5th Dist. 1990)*; *Los Angeles Unified School District v. City of Los Angeles (2nd Dist. 1997)*; and *Communities For A Better Environment v. California Resources Agency (3rd Dist. 2002)*. These court rulings invalidated the use of a "ratio theory" or "comparative approach" such as the City's "3% increase in trips" criterion because they improperly measure a proposed project's incremental impact relative to the existing cumulative effect rather than focus on the combined effects of both the project and other relevant past, present, and future projects. Furthermore, the opinion in *Communities For A Better Environment* stated that "the greater the existing environmental problems are, the lower the threshold should be for treating a project's contribution to cumulative impacts as significant." 2

In conjunction with this discussion, the DEIR discusses project contribution to cumulative impacts in the context of a 1% threshold (page 4.15-72). The DEIR should provide the rationale and institutional decision making process for arriving at this impact threshold as it falls within the same ratio theory context presented above.

UCSC Marine Science Campus CLRDP draft EIR Comments
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Page 2

3) General Mitigation Measure 4.15-6: improvements to the Route 1/River Street intersection have previously been identified in a Department Project Study Report. The University's "fair share" contribution to the City of Santa Cruz for this intersection improvement should be based upon that report.

3

4) Shaffer Road Extension, page 4.15-70 (DEIR) and Implementation Measure 5.1.3 of the Plan: analysis regarding this improvement is incomplete. Although the Plan does not require the extension, it acknowledges cooperation with the City for evaluation. The DEIR does not provide technical analysis supporting the statement that "Operations at the State Route 1/Shaffer Road intersection would still be acceptable through 2020 conditions..." Not only will the extension provide another option for local traffic, it will make Shaffer Road via Route 1 the most direct route to the Science Campus.

4

The Department recommends the University perform an alternative analysis with the extension in place for year 2020. The analysis should include discussions treating auto, bicycle and truck traffic. Intersection analysis should include both level of service and operational geometric evaluation (i.e., left turn pocket standards and capacity on WB Route 1).

This project's condition of approval should include language that stipulates, based upon the project's traffic contribution at the Route 1/Shaffer Rd intersection, that the University will contribute a fair share to the City for operational and/or capacity improvements if the Shaffer Road extension is constructed either prior to 2020, or, prior to completion of the complete Science Campus project, whichever occurs first.

5

5) Because the Draft EIR is a public informational and disclosure document, the specific amount and method used to calculate the "fair share" funding contributions should be disclosed in the Draft EIR and/or conditions of approval. Since the "fair share" funding contributions involve funding for State highway improvements, the calculation method should be made in consultation with District 5 and City of Santa Cruz staffs. Furthermore, proof of payment of these "fair share" funding contributions should be provided by the University to the District 5 Development Review Branch as part of the project's mitigation monitoring program.

6

The District 5 Development Review Branch would like to receive a copy of the responses to our comments and/or the Final EIR document. In addition, we would like to request a copy of any subsequent hearing notices and reports on this project. If you have any questions, you may call me at (805) 542-4751.

Sincerely,

Chris Shaeffer
District 5 Development Review Branch

cc: Chris Schneider, City Public Works; Sean Co, SCCRTC;
D. Murray, District 5 Planning; R. Barnes, District 5 Traffic Operations

COMMENT LETTER SA-1: CHRIS SCHAEFFER, DEPARTMENT OF TRANSPORTATION

SA-1-1: Comment noted. No response is necessary.

SA-1-2: The University understands that Caltrans does not agree with the City of Santa Cruz threshold for identifying significant traffic impacts. The University has previously sought to identify a methodology for other University-sponsored projects (specifically the UCSC Engineering Building) that was acceptable to both parties, but did not succeed. For the reasons stated below, the analysis reflected in the Draft EIR utilized the City standards of significance including the 3 percent threshold, as has been historic practice in previous University and City EIRs and other planning documents.

The City's description and defense of its traffic standards of significance are outlined in the City's *Shaffer Road/Monarch Village Apartments Final EIR*, November 30, 2001 (page 12D-1 through 12D-5). Those pages are incorporated by reference. The City standard essentially considers traffic impacts to be significant "only if traffic levels will change enough to be noticeable." The City also explicitly rejects the Caltrans position that against the backdrop of existing congestion, any increase in traffic is unacceptable. The City considers the Caltrans position to be legally unsupported and practically infeasible, as further described in the City's EIRs.

Moreover, contrary to Caltrans's assertion, the Hanford case does not preclude consideration of the relative magnitude of a project's contribution to an impact in determining its significance, which Caltrans labels a "ratio theory." Instead, the Hanford case ruled much less broadly that a "ratio theory" could not serve as the basis for eliminating the analysis of an impact from an EIR. Here, the EIR contains a detailed, quantitative model of the traffic impacts of the project, consistent with the Hanford decision. It is worth noting that the Hanford opinion explicitly upheld an approach to water supply impacts in the Hanford EIR that treated as less than significant a contribution found to be smaller than fluctuations in background conditions, similar to the City's approach to traffic impacts here. The City's approach also conforms to the standard suggested by the CEQA *Guidelines*, Appendix G, which considers whether the project would "cause an increase in traffic which is substantial in relation to the existing traffic load and capacity of the street system (i.e., result in a substantial increase in either the number of vehicle trips, the volume to capacity ratio on roads, or congestion at intersections)." Caltrans' proposed "single car" approach would eliminate the required consideration of substantiality. The University considers the City's approach to be reasonable and consistent with CEQA, and for the reasons set forth above, the University declines to adopt Caltrans's recommendation.

However, even if the University were to adopt Caltrans's suggestion regarding the standard of significance, there would be no material change in the analysis in the EIR. The same quantitative evaluation of traffic impacts would be included. There are no mitigation measures or alternatives identified by Caltrans that would or could be added to the presentation. As indicated in the Draft EIR, the University has adopted all feasible mitigation measures, including an aggressive transportation demand management program, to reduce the impacts of all campus projects,

including the current project.¹ These measures would also reduce traffic impacts to the maximum feasible extent at the intersections of particular concern to Caltrans.

The cumulative effect of the proposed project was studied for all of the study intersections and included the effect of both the CLRDP project and other relevant past, present, and future projects. This analysis showed that cumulative significant impacts are projected to occur at several locations where the future operating level would be unacceptable and this would occur regardless of the 1 percent or 3 percent threshold. The determination of whether the CLRDP project's impact is cumulatively considerable was made based on whether the project would add 1 percent or more to the total volume at each intersection. Consistent with the *Communities for a Better Environment (CBE)* opinion, a more stringent (i.e., lower) threshold of 1 percent was used for the cumulative analysis to acknowledge the fact the environmental problems are greater under cumulative conditions than they are under existing conditions.

The effect on intersection operations of traffic added by an individual project under any set of conditions (e.g., existing or cumulative) can vary. The addition of one or two vehicles to an intersection during the peak hour, even to a critical movement, will not substantially affect operations. In some cases, higher numbers of vehicles can be added to an intersection without affecting overall intersection operations. However, a threshold needs to be identified to provide a consistent measure against which significant impacts can be identified. The degree to which traffic is substantially affected is a matter of discussion amongst traffic engineering professionals.

An important consideration in the development of a threshold for identifying cumulatively considerable intersection impacts is the daily variation in traffic volumes. The change in total traffic volume that occurs from day-to-day can be as much as 5 percent or more at some intersections. The use of a 1 percent threshold for identifying cumulative impacts is conservative relative to the potential variation in traffic and is also more conservative than the 3 percent threshold used by the City for project-level impacts.

SA-1-3: Comment noted.

SA-1-4: The operations of the State Route (SR) 1/Shaffer Road intersection in 2020 with the proposed project are presented in Table 4.15-18 on page 4.15-66 of the Draft EIR and indicate LOS B and C operations in the AM and PM peak hours, respectively. The LOS calculations are included in the Draft EIR technical appendix. It is acknowledged that the Shaffer Road extension would provide the most direct route to the MSC campus, but is not required from an operations standpoint since no impacts were identified at study intersections 1 through 10 in the immediate vicinity of the site.

¹ These mitigation measures include roadway and intersection improvements to be undertaken by other agencies, to which UCSC would contribute financially. University contributions would be forthcoming upon approval of those improvements by the responsible parties (e.g., Caltrans, the City of Santa Cruz, or the County of Santa Cruz, as appropriate for the particular improvement). The CLRDP also includes several implementation measures which would reduce traffic impacts from the Marine Science Campus through transportation demand management (Policies 5.5 through 5.58 and the associated implementation measures). The University is not aware of any other mitigation measures that would be available to mitigate these impacts. If Caltrans were to recommend alternative mitigation measures, the University would consider modifying one or more of its mitigation measures to apply to the alternative mitigation(s).

SA-1-5: Comment noted. Development of the proposed project would not result in significant impacts requiring mitigation at the State Route 1/Shaffer Road intersection. As stated on page 4.15-70 of the Draft EIR, operations at the State Route 1/Shaffer Road intersection would still be acceptable through 2020 with the proposed project, even with extension of Shaffer Road, and a traffic signal would not be required. The typical two-lane collector street configuration would still be adequate. Also note that the analysis in the Draft EIR shows that extension of Shaffer Road would not be necessary for the operation of the Marine Science Campus under the CLRDP.

SA-1-6: As stated on page 4.15-33 of the Draft EIR, the University's fair share would be determined through negotiations with the applicable jurisdiction, which, depending on the particular improvement, could include Caltrans, Santa Cruz County, and/or the City of Santa Cruz. The specific amount of the University's fair share contributions cannot be determined until the costs of the specific improvements have been identified and the University has negotiated its fair share with the appropriate jurisdiction. As explained in the Draft EIR, the University will pay its fair share only if the jurisdiction has established a mechanism for collecting funds from other developers and utilities contributing to traffic impacts.

With respect to "fair share" funded improvements, please note that the University envisions this process to involve the following steps: The jurisdiction informs the University of a proposed improvement at the affected intersection. The University then negotiates its fair share. Next, the improvement is scheduled by the jurisdiction, and at that time, the University pays its fair share. Should proof of payment be requested, the University would provide it after completion of negotiations.



MONTEREY BAY

Unified Air Pollution Control District
serving Monterey, San Benito, and Santa Cruz counties

AIR POLLUTION CONTROL OFFICER
Douglas Quetin

24580 Silver Cloud Court • Monterey, California 93940 • 831/647-9411 • FAX 831/647-8501

UCSC

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Campus & Community Planning

February 17, 2004

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Environmental Assessment Group
University of California
515 Swift St.
Santa Cruz, CA 95060

SUBJECT: DEIR FOR UCSC MARINE SCIENCE CAMPUS CLRDP

Dear Staff:

The District has reviewed the referenced document and has no comments.

Thank you for the opportunity to review the document. Please do not hesitate to call if you have any questions.

Sincerely,

Janet Brennan
Supervising Planner
Planning and Air Monitoring Division

COMMENT LETTER SA-2: JANET BRENNAN, MONTEREY BAY
UNIFIED AIR POLLUTION DISTRICT

SA-2-1: The Monterey Bay Unified Air Pollution Control District indicates that it reviewed the Draft EIR and has no comments on it. No response is required.

CALIFORNIA COASTAL COMMISSION

CENTRAL COAST DISTRICT OFFICE
725 FRONT STREET, SUITE 300
SANTA CRUZ, CA 95060
PHONE: (831) 427-4863
FAX: (831) 427-4877



April 19, 2004

John Barnes, Director
UCSC Campus Planning
515 Swift Street
University of California
Santa Cruz, Ca 95060

Subject: *Draft Coastal Long Range Development Plan (DCLRDP) and Draft Environmental Impact Report (DEIR) (SCH# 2001112014) for UCSC's Marine Science Campus at Terrace Point*

Dear Mr. Barnes:

Thank you for forwarding the above-referenced documents to our office for review. We apologize that we were unable to provide these comments in advance of the extended deadline that you had provided us. We hope that these comments can still be useful to you as you prepare subsequent CEQA documents as well as finalize the DCLRDP for consideration by the University of California Regents and ultimately by the Coastal Commission.

In general, we found the documents to be thorough and well-thought out drafts. The University should be commended for the substantial effort and deliberation that have gone into evaluation of the Marine Science Campus site and its resources, as well as the plan for its subsequent development. Although there remain some outstanding issues as discussed in this letter, it is clear to us that the University has taken its task seriously, and has taken into account many of the Commission's previous comments related to this site and the DCLRDP process. The draft products are the better for this, and the information and materials developed to date should foster the level of informed public debate and discussion that is appropriate for this site and a long-range plan of this nature. We look forward to this continued evaluative process.

Accordingly, please note that the comments that follow are based on our preliminary review to date, and are designed to provide direction on the DCLRDP, as well as information requests and comments on the DEIR. Unfortunately, our review was hampered by a lack of available staff resources to consider the large volume of detailed and interrelated information in multiple documents. We have done the best we can at this juncture to highlight issues that warrant additional evaluation and information, and have provided recommended changes where we can. That said, due to time limitations, we were not able to provide conclusive comments in every aspect and this letter should be understood in that way. In particular, although we have recommended several specific changes to the DCLRDP, please do not take these as our last or only comments in this regard - particularly given that more and/or different information or other changes may emanate from responding to comments and finalizing the DEIR and DCLRDP documents for further review. As you know, this is an iterative process, and we intend to remain engaged in it and provide you with our best possible input, up to and including any subsequent Commission hearings on the CLRDP.

John Barnes, UCSC Campus Planning
 DCLRDP and DEIR (SCH# 2001112014) for UCSC's Marine Science Campus at Terrace Point
 April 19, 2004
 Page 2

Finally, because the DEIR and the DCLRDP are inextricably linked, many of our comments apply to both and should be taken in that vein whether identified in that way or not. Likewise, because the documents reiterate the same or similar information in multiple locations within them, comments should be taken to apply to the issues identified throughout all the documents, even if the issue is highlighted in our comments in relation to a particular section and/or document. Any page number references provided below are not a conclusive listing of where the comments apply, but rather are a subset of where they apply. It is intended that these comments apply to any referenced pages or sections as well as any other place in the documents where a similar discussion is located and thus a similar issue is raised. Please ensure that these comments are applied in that manner, and that the resultant DEIR and DCLRDP documents (and all appendices) are ultimately synced and made internally consistent.

Please consider the following:

Terrace Wetlands

1. The documents indicate that wetland W7 would be filled to allow development in the Upper Terrace land use area, and appear to justify this relative to the Coastal Act by identifying this wetland as non-ESHA where fill of it would be part of a restoration (and thus allowed by Coastal Act Section 30233). Please note that if W7 is not ESHA (and Section 30240 doesn't apply to it), then Section 30233 does not allow for it to be filled and such fill cannot be mitigated by wetland restoration far removed and west of it (in wetland areas W1, W2, and W6). Fill of W7 in this context would be inconsistent with the Coastal Act and the documents need to be modified to avoid such fill (see also wildlife corridor recommendation that follows). 1

2. The 100-foot buffer proposed for wetland W5 needs to be increased to protect ESHA values present there. As we have previously discussed with the University, we recommend that a minimum 150-foot buffer be applied to wetland W5 wherever feasible. 2

3. The documents do not discuss the additional area of potential wetland that is located east of McAlister Way from wetland W6 and south of wetland W8. It is our understanding that the University's consulting biologists were still evaluating this area for whether it should be delineated as wetland, but that this evaluation remains outstanding. The determination in this area, and the rationale supporting it, should be included in future iterations of the documents. If the area is delineated as a Commission-recognized wetland, then the Middle Terrace planning area will need to be adjusted to account for this resource and management prescriptions identified for it. 3

4. The documents indicate that that portion of the current access road that extends from the intersection of Delaware and Shaffer through to the California Department of Fish and Game facility is to be replaced by a new access road area roughly following the layout of the utility trenching that was associated with the National Marine Fisheries Service (now NOAA Fisheries) building. We do not concur that the replaced portion of the current access road be 4

- used for “controlled service access” including oversized service vehicles access and special event parking. We note that the Commission previously found that “it appears that restoration of this area in order to enhance wildlife corridor values would be more appropriate.” We recommend that the road in this area be abandoned, that the pavement be removed, that any remaining utilities be moved to the new road alignment, and the area be replanted with appropriate wetland and wetland buffer plant species. Because the upper terrace hydrology appears to be at least partially reliant on the raised fill supporting the pavement, it appears that at least some portion of the fill should remain so as to not adversely impact the hydrology of these resources. Remaining fill edges should be contoured as necessary to approximate as natural a feature as possible. This area is more appropriately identified for resource protection to enhance overall habitat value and system connectivity through restoration and not continued road access. 4
5. It would appear that the abandoned headwalls north of wetland W6 should be removed to enhance habitat in this area as part of the capital improvement and restoration program and to offset impacts. Please evaluate such an option. To the extent the headwalls (or more likely one of the headwalls) are necessary for hydrologic function upstream, please evaluate an option where the upper portion of the headwalls are removed and a lower portion left in place as necessary to preserve current hydrology upstream. 5
 6. The documents refer to wetland W1 as a drainage ditch. While this may be an accurate description of it’s use and current configuration, this area also provides habitat value and has been identified in the documents as ESHA. Because the CLRDP will provide the blueprint for future site development, and because it provides for restoration and protection of W1 as ESHA, we recommend that terminology in the DCLRDP regarding W1 be changed to call this area a ‘wet channel’ or a ‘historic drainage ditch’ (or something similarly non-pejorative) so as not to lead to internal inconsistencies or confusion in ESHA interpretation and/or plan implementation in future development applications or otherwise. 6
 7. The DEIR’s biological resources chapter refers to 2 wetlands totaling 63 square feet in the Upper Terrace planning area (on page 4.4-51), but all other portions of the documents refer to only wetland W7 (at 43 square feet) in this area. Please clarify and/or correct. 7
 8. The Commission’s approval of the NOAA Fisheries building was designed to allow filtered and treated runoff to be directed into wetland W5. From the documents, it appears as though this may not be the current state of runoff management at the NOAA Fisheries building. To the extent filtered and treated runoff is being allowed into wetland W5, then this would be consistent with the Commission’s action. Please provide details on the actual BMPs used to filter and treat runoff, and the quality of such runoff, that is being directed into W5 in this regard. 8
- Younger Lagoon Reserve**
9. It is not clear to us that Younger Lagoon Reserve (YLR) will be adequately buffered from the 9

substantial development program envisioned, particularly in relation to development proposed in the Middle Terrace planning area. Given the sensitivity of YLR, we believe that a buffer of at least 300-feet would be more appropriate than the more limited buffer distances identified in the documents. If a buffer of less than 300 feet from development areas to YLR is to continue to be proposed, we recommend that the documents evaluate the feasibility of extending the berm (currently located above the reserve in the Lower Terrace area) to the north to buffer the reserve from development proposed in the Middle Terrace area. The documents should also note on a site plan the extent of the existing berm as well as possible extension of it in this regard.

If sheer distance is not available or preferred, then such a solid berm feature may be able to provide substitute buffering capabilities (to the 300-foot distance buffer that would be more appropriate in this area). This is particularly the case for development proposed west of McAlister Way in the area where the DCLRDP identifies two undetermined "Marine Research and Education" facilities and, to the west of that, the Monterey Bay Aquarium Sea Otter Research and Conservation Center (SORACC). Although we appreciate that the proposed SORACC facility is a less intensive use than development proposed for this area in previous plan iterations, we note that the Commission previously found that this area "might best be considered for exclusive habitat protection purposes, including the potential for restoration as upland habitat." It is not clear that upland habitat wouldn't be a better use for this area (and the documents do not include the requested evaluation in this regard).

9

10. If the University intends to rely on the YLR Management Plan or portions of it, then that plan or those portions should be included in the DCLRDP, and changes to it subject to the CLRDP amendment process.

10

11. The documents indicate the YLR does not contain any special status plant species (see, for example, DEIR page 4.4-21 and DCLRDP page III-12). However, previous submittals by the University (in support of keeping YLR off-limits to general public access) have identified several plant species considered rare or locally unique. Please correct and/or clarify.

11

Wildlife Corridors

12. We appreciate that the documents identify a wildlife corridor on the northern boundary of the site. However, we are concerned that the corridor width of 20 feet along with an 80 foot buffer area is not wide enough to provide sufficient corridor value; particularly immediately adjacent to the proposed shared warehouse and laydown facility in the Upper Terrace land use area, and particularly in light of potential use of the corridor by California red-legged frog (for whom a 300-foot corridor is generally recommended in USFWS's recovery plan for the species).

12

In addition, the documents partially determined that the overall 100-foot corridor is wide enough in part due to the presence of an additional 50-foot of buffer on the inland side of the University's property and located in the railroad right-of-way. However, the railroad right-of-

way is currently being contemplated for both rail and trail improvements, and it is not clear that this right-of-way will continue to provide buffer value in this sense. It is likely that the railroad corridor will be more used rather than less in the future, and that competing demands within it will argue for full use of it, up to the right-of-way line. Because of this, it doesn't seem appropriate to use potential buffer values of the vacant rail right-of-way to justify lesser corridor widths on the University property. The documents should reflect this discussion.

To resolve the issues described above in relation to fill of wetland W7 and with the width of the wildlife corridor, we recommend that the University evaluate modifying the Upper Terrace planning area and development proposed within it to increase the width of the wildlife corridor so that it includes wetland W7 restoration as part of it. Wetland W7 appears to be about 150 feet south of the property line, and thus this would appear to be a feasible modification in this regard. In addition, we recommend that the University consult with USFWS biologists as to whether the corridor in this area should be 300 feet wide as recommended in the Recovery Plan for California red-legged frog, and that this 300-foot corridor permutation be evaluated as well.

12

13. In addition to the wildlife corridor evaluation specified above, we recommend that the documents evaluate the potential for designating a second wildlife corridor between the railroad tracks and Delaware Avenue, to the south of the Upper Terrace planning area. This area will provide for wildlife movement from Younger Lagoon through the wetland and buffer areas of W2, W6, and W3 and through to Antonelli Pond. As such, this area will provide a de facto corridor, whether it is identified as such or not. The DCLRDP does not contemplate development in this area, as it is mostly ESHA and buffer for wetland W3, and it would appear to be a minor change to designate this area for a wildlife corridor area as a mitigation for project impacts on wildlife. Accordingly, the plan should account for this and ensure that connectivity to and across Shaffer road is identified in relation to this corridor. The width of such corridor should be premised on the same evaluation as described above.

13

14. The wildlife corridors discussed above need to include adequate passage across the Shaffer Road right-of-way. This is alluded to in the documents, but it is implied that such connectivity improvements would be encouraged, and not necessarily required (see, for example, DEIR pages 3-26 and 4.4-72). We believe that the documents need to state that corridor connectivity be required where the wildlife corridors connect to Shaffer, and provide some parameters for the type of improvements that would be necessary in this regard to Shaffer Road (e.g., size and design of culverts and culvert entrances). Given the magnitude of development proposed, and to offset habitat impacts, it may be necessary to require such improvements as part of the DCLRDP's capital improvement program and/or as part of projects to improve the main campus entrance at the intersection of Shaffer and Delaware, and/or to improve the intersection of Shaffer Road with the railroad right-of-way.

14

15. The DCLRDP identifies "Wildlife Corridor" as its own separate land use designation. It is not clear to us that this designation is necessary or that it provides any direction of itself. It appears that this designation could be eliminated and the "Resource Protection" land use

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designation applied to these areas. To do so would allow for DCLRDP to be made clearer by avoiding duplicative policies and/or text, or inference that policies/standards that apply to resource protection don’t apply to these corridors. Please consider collapsing this separate land use designation into the resource protection land use designation.

15

16. The DCLRDP’s combined constraints figure (DCLRDP Figure 3.16 on page III-24) omits the wildlife corridors. Please add.

16

Other Habitat Issues

17. The documents indicate that the only ESHA on the terrace portion of the site is wetland ESHA. However, the documents indicate that raptor and other species – including several special status species – make use of this terrace area for foraging and other purposes. We are concerned that the document may underestimate the importance of the non-wetland terrace habitat in this regard, and thus the impacts of the DCLRDP on these species. The DEIR conclusion appears to be based on a distinction between nesting and other types of habitat uses. Please supplement the ESHA analysis (that concludes that the non-wetland portion of the terrace is non-ESHA) in this regard, and the manner in which the DCLRDP will mitigate for impacts to this habitat area (through species-specific mitigation, overall mitigation, enhanced corridor connectivity (see also above), etc.).

17

18. We are unclear regarding the utility corridor located west of the University property and west of the City limits that appears to extend from Shaffer Road north and west of the Raytek facility and the City corporation yard, and across Younger Ranch, before entering the University property near the bend in the road at wetland W8 (see, for example, DEIR figure 3-10). It is not clear whether this is an existing or proposed utility area, but its location appears problematic for several reasons. First, any development in this area (e.g., installation, maintenance, repair, enlargement, etc) will necessarily impact designated ESHA and ESHA buffer areas and these impacts should instead be avoided. Second, the utility infrastructure is located outside of the City limits in an area zoned for commercial agricultural (CA) in the County, and it is not clear that such infrastructure can be rectified against the certified LCP that applies there. Third, the utility corridor is located entirely off the University’s property in Younger Ranch, thus requiring consent of Younger Ranch owners, and it is not clear as to whether they have or would consent. It appears that all utility infrastructure could follow the internal road alignments, be kept within University property (and City limits), and avoid the problems identified above. We recommend that this corridor be eliminated, and all utilities follow road alignments.

18

19. It is not clear whether habitat restoration/enhancement measures would be undertaken from the DCLRDP Resource Management Plan, or whether additional (and more specific) plans would be developed prior to implementation when individual projects are contemplated. Please clarify. If it is the later, then the specific plans can provide the additional level of detail that we believe to be necessary for restoration/enhancement implementation. If it is the former, then the DCLRDP Resource Management Plan should be supplemented with more

19

specificity, including more specific and customized restoration plans and planting palettes. | 19

20. The DEIR indicates that noise impacts on wildlife are addressed in the biological resources section (see DEIR page 4.11-9). However, we could not find this evaluation. Please clarify and please ensure that the DEIR includes such an assessment of all wildlife uses areas, including the wildlife corridors to be designated. | 20

Public Trail Access

21. The DEIR summary of Coastal Act access and recreation policies misses an important point (see text starting on page 4.9-15). The Coastal Act requires that maximum access and recreational opportunities be provided. This is a different standard than that stated in the DEIR, and affects the way projects are analyzed for Coastal Act consistency. The DEIR should be corrected on this point. | 21

22. The trail map (DEIR Figure 3-9 and DCLRDP Figure 5.5) should be modified to provide a trail connection around the west side of wetland W4 to connect to trails coming from the north (down the new access road) and the south (along the east side of wetland W5 and the NOAA Fisheries building) to ensure trail connectivity. The DEIR map also includes a public trail connection (in addition to the controlled trail access) to both overlooks D and C; we assume this is in error and the DCLRDP figure is correct in this regard. Please make necessary corrections. | 22

23. The documents generally describe a minimum trail width of 5 feet, but the DEIR indicates on page 4.1-30 that it is 6 feet. Please correct so that the minimum widths are consistent. | 23

24. We do not see why trails should not be separated from vehicular areas in all cases, and would suggest that this separation be made mandatory (see, for example, the language on DCLRDP page V-27). | 24

25. To account for future events and/or development that could result in discontinuous access, the DCLRDP should require that the path system be maintained to provide continuous through access in the same general areas as detailed on the public access map. | 25

26. We are concerned that the DCLRDP doesn’t provide explicit enough parameters on fencing (and walls, other barriers, etc.) that may be installed to direct where access can and cannot occur, including broad parameters on future actions that may be taken by the university in this respect. We believe that the DCLRDP should be supplemented with an explicit section on site fencing that more precisely specifies the types of fencing and barriers that will be used, how and when they will be considered, etc. (see also visual comments). | 26

27. The Commission continues to be interested in an evaluation of a trail connection around Younger Lagoon, particularly should it remain closed to general public access. We acknowledge that at this time the University does not control the western side of the Lagoon, and that such an evaluation is made more difficult by this fact. That said, given that the | 27

DCLRDP is a long range plan, we believe that it should provide some direction for trail connectivity to a potential future trail connection off University property and around the Lagoon. The DCLRDP text should be updated with this discussion, and describe generally how the trails on the eastern side of the lagoon could connect to the western side of the lagoon in such a scenario.

27

Public Parking Access

28. The parking analysis as it relates to providing public access parking is confusing in some ways. It is not clear whether the DCLRDP is attempting to redistribute existing public parking spaces, or to define how new spaces would be distributed, or both. Existing parking spaces provided in the Lower Terrace planning area are already dual-use (by virtue of the Commission's approvals for the Discovery Center and the Ocean Health building projects). We are not supportive of making these spaces (identified by the DEIR as 85 spaces) restricted in some way. In other words, they should stay dual-use. It seems as though this may be what is proposed by the text on DEIR page 4.9-34, but it is not clear throughout the documents. This DEIR text also indicates that an additional 50 dual-use spaces and an additional 10 dedicated public parking spaces would be provided (i.e., a total of at least 135 dual-use spaces and 10 dedicated coastal access spaces). Please clarify what is proposed in this respect.

28

In any case, both documents need to be more explicit on how many spaces would be available for general public use – coastal access and otherwise – and where they would be located. We are supportive of the additional dual-use spaces being distributed within the site adjacent to access features (like trailheads and overlooks), and the dedicated spaces being located nearest to the areas of highest (most likely nearest the shoreline). As to the appropriate number of such spaces to be provided, it depends upon the clarification above, and we will wait to comment on this point until we have more information.

29. We are not supportive of portions of the documents that imply that a fee may be charged to use public parking spaces (permits, meters, etc.). We recommend that same be stated explicitly in the DCLRDP. If there is an issue of ensuring adequate parking space turn over (and ensuring that such spaces are not otherwise occupied by the same vehicle all day), then we could understand some type of a time limitation to encourage this. However, there does not appear to be evidence suggesting that this is a problem or would be a problem at this site.

29

30. Please note that the text indicates that DCLRDP Figure 5.5 maps "Public Coastal Access Parking" but that the figure does not show such parking areas. Please clarify and/or correct.

30

Overlooks

31. We note that the documents refer to overlooks A, D, and E being constructed if and when future development on the Lower and Middle Terrace planning areas is constructed. Please note that these overlook improvements are already required as part of the Commission's approval of the closure of Younger Lagoon to general access. Please correct both documents

31

- in this regard. | 31
32. The documents include reference to overlook C (at the bluff at the end of McAlister) being open during the hours that the Discovery Center is open (see, for example, DCLRDP pages B-55 and C-2). This is incorrect. This overlook, like the trails, is open during daylight hours (one hour before sunrise until one hour after sunset) per the Commission's approved access plan for the site. Please correct the documents. | 32
33. The documents indicate that overlook D near the Ocean Health building is existing. This overlook has been partially constructed, and is required to be completed (see above), but it is not "existing" in the sense that it is a permitted, completed, and available overlook. Please correct. | 33
- Other Public Access**
34. The DCLRDP Resource Management Plan (DCLRDP Appendix B) provides that security fencing will be "improved" at overlook C, and that the gate at the northern end of the Ocean Health building will be kept closed. Any such improvements need to be more clearly identified as to what they mean (see above comment regarding fencing parameters). As to the Ocean Health gate, we must assume that this applies to the gate that is west of the Ocean Health building, and not to any gates in or near McAlister Way (as none have been permitted previously). Please clarify. | 34
35. Both documents dismiss the notion of providing vertical access to the ocean (to provide for surf recreational users), but lack a clear evaluation of this option (an evaluation that was requested previously by the Commission). Please evaluate the potential for providing access from the terrace area to the surfing resource offshore of the site. This may involve consideration of an access stairway, informal trail access, etc.. If a stairway were to be included for surfing access, it could be made to provide direct to-the-water access (much like existing stairways used predominately for surfing further downcoast in both the City and the unincorporated Pleasure Point area of the County). | 35
36. The DCLRDP includes some language that concerns us about future procedures that would be established to provide for "admission" to the site (see for example DCLRDP page V-29). As a public University campus, we are not supportive of charging a fee to access the site, and we recommend that the CLRDP state that access to the site is free. Further, we believe that any procedures for access should be spelled out in the document itself (and not established at a later date). This should be clarified and, further, we believe it should be made explicit that access to the site is free. | 36
37. The documents indicate that the hours of public access to the site may be limited, but do not specify to what extent. We note that, currently, public access to the site is during daylight hours (one hour before sunrise until one hour after sunset) per the Commission's approved access plan for the site. If some lesser amount of access is proposed in this regard, it needs to be detailed and information and analysis supporting such a change provided. We are not | 37

- supportive of additional restrictions to public access. | 37
- 38. It is not entirely clear what trails would be available for bicycle access versus strictly pedestrian (and wheelchair) access. Please provide details on this point. | 38
- 39. The DEIR states that there “are no formally established access trails or recreational uses on the project site” (see DEIR page 4.9-16). This is inaccurate. The Commission has long recognized historic and more recent access and recreational uses on the site, and has approved an interim access management plan for them that remains in effect. Please correct. | 39
- 40. It needs to be clear in the documents whether the recreational areas (e.g., sports fields and courts) envisioned for use by site users would also be available to the general public. As a public University campus, we do not see a reason why this wouldn't be the case. Please clarify and provide explicit language regarding such areas. | 40
- 41. DEIR page 4.15-15 and figure 4.15-4 describe existing and planned bicycle facilities in the project study area. This analysis appears to omit the recently completed Class I recreational trail from Shaffer Road though to Wilder Ranch. Please correct. | 41

Views

- 42. We appreciate that the site has been designated into development and non-development nodes, and generally agree that this type of arrangement helps to promote the isolated nature of the facility and enhance its ability to act as an urban-rural transition zone. That said, the Commission has already found that existing development at the site has resulted in “a significant cumulative visual impact from building scale and site coverage.” In that context, the scale of the DCLRDP's proposed development program continues to raise concern. Development proposed would be as large (or larger, see also building heights comment below) as existing structures, and would result in more than a 300% increase over what exists at the site now. The visual simulations are helpful in evaluating this increase, but, as we have previously indicated, we continue to believe that it may be necessary to stake and net the site to approximate build-out under the CLRDP to be able to fully evaluate the consequence of such a building program. We should discuss the parameters of this and set up an appropriate time and methodology for such staking. | 42
- 43. We appreciate that visual corridors have been defined and protected, however, we have not been able to confirm that the corridors are correctly sited in this regard. In addition, there may be other corridors than those identified that may be worth evaluating as significant (including the corridor between the De Anza residential community and the NOAA Fisheries building as seen from the City's Moore Creek property; the view from the railroad right-of-way in the event this incorporates a recreational trail corridor; and the view at the Delaware entrance to the site). Also, the corridors don't account for the overall scale and massing issue described above. The DCLRDP appears to base its visual protection policies exclusively on the identified corridors, and not on other forms of view blockage. If these policies remain structured in this way, then the corridors need to be field-verified and agreed upon. | 43

- 44. The DEIR indicates that longer range views of the site from the City's Moore Creek property (i.e., previously the Bombay property) are not available. This seems incorrect to us, and may be based on calculating distance from the City property to the northern edge of the site. However, the City's property extends well inland, and if the DEIR is basing this determination on distance, then the distance should include the whole of the site (and not just to its northern boundary) and the inland extent of the Bombay viewshed. Please clarify why and how these views are not available, or please describe the view that is available and the impact of the project on it.

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- 45. The DEIR qualifies views as scenic or not scenic, and concludes whether the project would or would not impact them. We have not been able to field verify these conclusions, and will thus have to defer comment on the appropriateness of such conclusions.

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- 46. The documents measure height in some cases relative to "top plate heights" and to the "midpoint of the roof pitch" (see, for example, DEIR page 4.1-41 and DCLRDP page V-20). Please provide a definition and a graphic depiction of these elevations, and any other elevations that are to be used to measure height.

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- 47. The documents refer to site fencing being natural and blending with the landscape and the development aesthetic, and they include photo representations of fencing that appears to do so (see for example DCLRDP page IV-15). However, the documents also refer to maintaining existing fencing (e.g., chain link fencing), and possibly extending such fencing, that clearly does not blend with the proposed aesthetic. We recommend that all fencing, including replacement for existing fencing, and including security fencing, be made to conform over time to the natural aesthetic and design, including using natural materials that will weather and better fit into the site aesthetic (e.g., wood, split rail). The DCLRDP should be explicit on this point, including identifying existing fencing location and type, and the changes that will come with implementation of the DCLRDP. As discussed above, we believe that the DCLRDP needs to include a section specific to fencing.

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- 48. The DEIR indicates that underground parking facilities were not considered for further evaluation because they would be more costly, leading to possible drainage impacts, but it doesn't provide analysis or information on this point (see DEIR page 5-6). The DEIR indicates that the additional parking area associated with future CLRDP build out would require 4 acres of land area. This is a substantial amount of area on the site (equivalent in area to the entire Upper Terrace land use area), and we believe that the DEIR should be supplemented with cost figures and descriptions of the potential drainage (or other) impacts that would be associated with undergrounding parking. To the extent parking could be located underground to allow more area to be left undeveloped and thus reduce other impacts, and to the extent this is feasible and doesn't result in other sorts of resource impacts of which we are unaware at this point, then such a project permutation should be more fully explored.

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- 49. The documents describe large planted windrows being installed, but the visual simulations do

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not account for these. We understand using the simulations to show a worst case scenario, but believe that the windrows themselves need to be modeled in some way so as to allow evaluation of this feature that could be as significant in its own right as the buildings. Please supplement the DEIR with some elevation views and/or additional simulations in this regard. In addition, the DCLRDP indicates that a single species is preferred (e.g., Monterey cypress), but not required, and describes several different species that may be considered – all with different physical attributes. We believe that a mass as significant as the windrows proposed needs to have specificity as to the species to be used in this regard, and suggest that the documents identify this species.

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50. The DCLRDP indicates that proposed buildings will be similar in scale to existing buildings, and proceeds to provide the existing building heights for the NOAA Fisheries building, the Ocean Health building, and the Discovery Center (see DCLRDP page VI-3). This section causes us some concern for several reasons, including the fact that the Discovery Center and NOAA Fisheries heights that appear to be shown are higher than that that was approved by the Commission. In the case of the Discovery Center, the DCLRDP indicates that it is significantly higher because this structure was permitted at 24 feet tall (to the roof peak) and the DCLRDP says it is actually 34 feet tall at the peak. That would make it 10 feet taller than the Commission authorized. For the NOAA Fisheries building, the discrepancy appears to be less (the DCLRDP appears to indicate a 38-foot height when it was approved at 36 feet in height). Please clarify.

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51. Note that the Santa Cruz County LCP policies cited (including LCP Policy 5.10.3 and 5.10.11) include a key phrase worthy of additional explanation in the documents; namely that they refer to development that “is unavoidably sited” in public viewsheds (see, for example, DEIR pages 4.1-3 and 4.9-46 and 47). What this means is that the first LCP priority is to site development so that it is not visible in these public viewsheds. It is only when such visible siting cannot be avoided that screening and other requirements apply. This is an important distinction and should be developed in the documents because it affects the way the Santa Cruz County LCP analysis of the project’s viewshed impacts is framed.

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Water Quality

52. We are very pleased with the manner in which the University has chosen to address runoff on the site, and believe that the DCLRDP’s Stormwater Concept Plan (SCP) is a model that other large developments and plans should emulate. We believe that the focus on wet ponds and natural treatment/conveyance systems (as opposed to concrete and solely end of the pipe units) in tandem with source control BMPs as a “treatment train” represents the state of the BMP art for water quality, and should result in measurable water quality improvements on and offsite. Although we do have some specific comments on the SCP (below), we believe that the University has positioned itself on the forefront of water quality protection progress and should be commended for pursuing and committing to this course.

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53. The DEIR references a June 24, 2002 SCP (on page 4.8-1). However, the DCLRDP delivered

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- to our office includes a SCP that is dated October 22, 2003. Please confirm that the DEIR analysis is based on the October 22, 2003 SCP, or correct as necessary. 53
54. The SCP refers to the g-guidance for maintaining TSS loading and rates/volumes as well as undetermined "RWQCB water quality objectives" for measuring success (and the DEIR reiterates similar general standards). We believe that there needs to be more explicit and inclusive water quality success standards, monitoring parameters, and adaptive management measures identified within the documents than those thus far identified in the SCP. We have some criteria models from other projects that might be adaptable to this site (e.g., the standards developed for the Pajaro Valley High School storm water system), and would be happy to work with the University to come up with mutually agreeable parameters. 54
55. We have several comments on the wet ponds proposed:
- First, it is not entirely clear from the documents whether the wet ponds would be created by digging out pond beds within the existing topography, or by forming berms, or by some combination of the two. The cross-sections provided in the SCP are not clear in this respect because they do not identify existing grade. Please provide better specificity on the physical construction of the wet ponds in this respect. These ponds need to be understood not only in relation to their ability to filter and treat runoff, but also in their ability to alter the site's aesthetic. It may be that there are appropriate trade-offs in this regard, but we need to better understand their physical configurations to be able to better make this determination.
- Second, to be able to function most effectively, the wet ponds need to be vegetated with appropriate hydrophytic species capable of aiding pollutant removal. The SCP appears to omit such details, and we recommend that a planting palette be provided specifically for this purpose. 55
- Third, in terms of regular maintenance of the ponds, and particularly with the inclusion of the hydrophytic species discussed above, we believe the monthly mowing and removal of vegetation to be too aggressive, and that this is more appropriately done on an annual basis to allow these species to continue to provide water quality pretreatment during summer months. In addition, the shrubs to be removed should be limited to those non-native recruits that have established themselves, and not the native hydrophytes planted and maintained for water quality purposes.
- Fourth, we understand the premise of using more regularly maintained forebays in wet ponds, but it appears that the SCP does not define the parameters of these sub-components of the ponds in cross-section, site plan, or narrative (other than prescribing maintenance parameters for the forebays on SCP page 36). We suggest that the forebays be better described in this sense.
56. The SCP identifies a series of source control BMPs. However, these are very broad and lack specificity as to how and when they would be implemented. Please provide additional details 56

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on this point. Also, we recommend that public education (for users of the site) be added as an additional source control BMP. There are a variety of public education water quality materials that have been developed and could be tailored for use on this scale.

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57. The SCP indicates that engineered stormwater treatment systems will be used to address potential contaminants at parking lots, outdoor maintenance areas, and laydown yards (SCP page 21). We have several comments on this point.

First, the drainage planning area prescriptions omit such engineered systems from the treatment train described for each drainage basin. We believe that such intensive and specialized use areas need to include engineered devices (in addition to the wet ponds and swales), as described in the SCP, to adequately treat runoff there. Such requirements should be made explicit in each concept drainage plan.

Second, we are concerned that the types of activities that could take place at the maintenance yard and laydown areas could result in potentially degrading wastewater generation independent of typical runoff (through wash down, accidental spills, specialized chemicals, etc.). The SCP should be clear that the engineered treatment devices chosen in each case should be adequate to accommodate the full range of expected activities and potential contaminants that may make their way from the activity areas into the runoff stream.

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Third, we recommend that there be areas established and constructed (e.g., concrete pads) within any maintenance yards and/or laydown areas that are specifically designed for heavier duty activities that could generate potential dangerous contaminants (e.g., equipment repair, fuel dispensing areas, etc.), that such activities be confined to these areas, and that these areas be equipped with plumbed sanitary sewer connections. Overall, the maintenance yards and laydown areas should include some form of containment berm at their edges (e.g., paved curbs), and we recommend that they be equipped with washdown valves that are plumbed to the sanitary sewer or that can be switched over to the sanitary sewer in the case of larger area washdown and/or spills.

Fourth, the SCP identifies two examples of engineered treatment systems that may be used (Vortech and Stormceptor). We are familiar with both of these units, and would suggest that the Stormwater Management Inc. *StormFilter* system be added to this list, and encouraged for use. Where particularly sensitive receiving waterbodies are present, the Commission has typically required the *StormFilter* treatment device as the "finishing" component of water quality runoff system (including in the nearing completion Monarch Village development adjacent to Moore Creek to the northeast of the site).

58. It is not clear to us from the SCP prescriptions what level of gross filtration will be provided at the point where runoff is first directed to the vegetated swales on the way to the wet ponds. Please clarify. We note that in similar 'treatment train' systems involving swales and wet ponds, the Commission has required systems such as the CDS Technologies, Inc. continuous deflective separation (CDS) units. Because of the general lack of grade separation (from

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- input to outlet points for such a unit), such a CDS system may or may not be feasible at the campus site. That said, we expect that some similar filtering apparatus capable of the same level of gross pollutant and debris removal will be installed at the beginning of each treatment train, and suggest that the SCP be modified accordingly. 58
59. The SCP indicates that conventional storm drains and concrete swales would be used in drainage area D because of the “limited space available” there. It doesn’t seem to us that there is limited space available here, and we recommend that the same natural treatment and filtration conveyance systems with wet ponds proposed for the other drainage basins should be proposed here as well. Please provide additional evaluation in this respect. In addition, the grassy swale filtration BMPs present in this drainage area were previously required by the Commission, and replacing them with concrete conventional drainage collection and piping systems appears to be inappropriate. 59
60. In addition to the standards prescribed for each drainage basin in the SCP, the Commission’s typical requirement is that ‘treatment train’ systems be sized for the volume of runoff produced from irrigation and from each and every storm and/or precipitation event up to and including the 85th percentile 24-hour runoff event for volume-based BMPs and/or the 85th percentile, 1-hour runoff event (with an appropriate safety factor) for flow-based BMPs. We recommend that these requirements be added to the standards for each SCP drainage basin. 60
61. The SCP and/or the DCLRDP policies need to make clear that the vegetated filter strips, swales, and wet ponds that are created must be made to look as natural as possible through, at a minimum, undulating (and nonlinear) edges and contours. 61
62. Any check dams used to enhance residence time in swales should be made of natural materials (e.g. woody debris), or semi-natural materials (e.g., rock with hydrophytic shrubs), if at all possible. Artificial structures that appear unnatural (such as flat concrete headwalls) should not be used for this purpose. 62
63. The documents indicate that vegetated swales would be used as feasible adjacent to roadways. We are unaware of any feasibility issues that would prevent such swales, and suggest that they be mandatory. 63
64. The wetland buffer for W2 and W3 appears to be incorrect in SCP figure 2. As a result, a stormwater pond appears to have been sited within an area that is actually buffer. Please correct figure 2 and adjust the pond accordingly. 64
65. Similar to the specific washdown issues at maintenance and laydown yards described above, food service facilities are notorious for their contribution to impaired water quality due to mat and other washdown. The precise nature of the food service facilities contemplated under the DCLRDP are not clear from the documents, and there aren’t any specific water quality prescriptions identified for them. We recommend that the documents make clear that washdown areas provided for food service facilities likewise be contained (e.g., bermed, 65

- curbed, covered, etc.) and plumbed to the sanitary sewer. | 65
66. We are concerned about the quality of water passing to the site from the culvert under the railroad tracks at wetland W2. North of the railroad tracks (and presumably the source for the runoff discharged from this pipe) is the Raytek facility and a City corporation yard. It is unclear what measures have been taken to filter and treat runoff directed into this culvert, and thus the degree to which this discharge is affecting wetland W2 and other site resources, and whether remedial measures are necessary on-site and/or upstream. Please provide additional detail on this culvert and the nature of the runoff emanating from it in this regard. | 66
67. We need to better understand the parameters of the current and expected seawater discharge (including, at a minimum, what runoff is and will be directed to this discharge, what wastewater is and will be directed to this discharge, what treatment and filtration is and will be applied to the wastewater stream prior to its discharge, and what is and will be the quality of water that is discharged) and what are and will be the standards for any general NPDES permit that may cover this. This information and the water quality standards are not clear in this regard (see, for example, DEIR page 4.8-13 and 14), and the effect of the discharge on ocean water quality is thus unclear. In addition, this system appears to rely on a Stormceptor unit as its finishing system. To be able to understand whether this unit is adequate for this purpose, the documents need to provide additional specificity that details this unit's capabilities in filtering and treating runoff and any other constituents of this unique waste stream. | 67
68. The DEIR indicates that the DCLRDP requires that a minimum of 30% of the land within each drainage basin be pervious (see DEIR page 4.8-27), but we couldn't find this requirement in the DCLRDP. Please clarify and/or correct. | 68
- Agriculture**
69. The DEIR provides a fairly complete description of the agricultural viability issues at the site. It appears to be missing, however, one of the four prime agricultural tests. Namely, whether the land "has an annual carrying capacity equivalent to at least one animal unit per acre as defined by the United States Department of Agriculture." Please supplement the analysis for this factor. | 69
70. The DEIR includes a mitigation measure to install a 4-foot fence along the western boundary of the site above YLR (see DEIR page 4.2-15). We believe that this fence could be inconsistent with the site's open space aesthetic in this area, may include inappropriate fencing materials (see fencing comments), and do not understand its value in relation to the impact it identifies. It seems to us that such a fence would be an anomaly at the edge of the wetland area to be enhanced that runs along this edge of the property, and we don't believe its inclusion to be appropriate. We understand the value of enhancing plantings in this area (i.e., appropriate wetland plantings), but the fence does not appear to be appropriate. | 70
71. The DEIR indicates that the City would require a \$30,400 hook-up fee for water, and a | 71

\$1,238 yearly readiness fee (see, for example, DEIR Appendix B, page B-3). It is presumed that the University is already “hooked-up” to City water, and already has a readiness fee as the baseline condition against which the comparison is to be made. Please clarify why there would be hook-up and readiness fees of this nature, and whether the same fees would apply to the other portions of the project proposed or is only applicable to irrigation water. Please provide all underlying assumptions and requirements supporting the reasons surrounding the such fee requirements pertaining to irrigation water and projects proposed for the site.

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72. Both documents refer to Telone II setbacks being modified at a future date. We do not believe that the DCLRDP should include any automatic updates by reference (e.g., on DCLRDP page V-11) tied to Telone II requirements. The document instead should specify setbacks that apply now. If the University wants to change setback requirements in light of future pesticide regulatory changes, then amendments to the CLRDP can be pursued as necessary at that time.

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Housing

73. We note that the DCLRDP continues to propose significant housing facilities. We are continuing to evaluate the relative priority of housing for this site in relation to the intensity of use that is appropriate. It should be noted that the Commission has consistently found that the current enclave of coastal dependent marine research facilities (separated from the residential and industrial uses of the urbanized areas of Santa Cruz to the east) represent an intentionally isolated resource dependent facility for which appropriate siting opportunities are rare, and for which the Terrace Point site provides an important opportunity to pursue other integrated coastal-dependent research facilities. Any housing or other non-priority uses that may be contemplated will be evaluated in this context.

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As previously requested, we suggest that the DEIR’s alternatives section should evaluate a permutation where housing, other than the minimum necessary for security/caretaker housing, is not a part of the development program. We would suggest that this additional permutation be added, at a minimum, to the analysis of the proposed DCLRDP and to the Reduced Program Alternative presented in the alternatives chapter.

74. Bracketing the larger housing issue described above, we do not understand why there needs to be separate caretaker housing near the coastal bluff. This area nearest the bluff raises relatively more concerns relative to the land use priorities described above than more inland locations on the site. Land area nearest the ocean and the existing lab enclave is limited, and it doesn’t appear to us appropriate to site housing here. It is out of context with the use priorities, the public access viewshed (otherwise limited to a view of a working lab in this area), and site aesthetics overall. We recommend that any caretaker housing allowed in the DCLRDP be located inland on the site and out of the Lower Terrace Planning area.

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75. If housing were to be allowed on the site, then it would need to be intimately linked with the coastal dependent facilities and programs operating there. Our reading of the documents

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- indicates that this is the general intent, but the specifics of implementing such a requirement are less clear to us. In at least one place, it indicates that affiliation would only need to be to UCSC generally (see DEIR page 4.15-27). Please provide additional information, including enforceable CLRDP policies, that detail the measures that will be taken to ensure that any housing that is allowed is strictly limited to persons that require on-site housing due to their intimate link to the coastal dependent facilities and programs on the Marine Science Campus. 75
76. The documents identify multiple types of housing units (apartments, tandem rooms, overnight rooms), but don't appear to specify their allocation within the development areas or the proposed housing complexes. Please provide information on the location proposed for each type of housing unit, and the reasoning behind that location. 76
77. The prototype site plan in the DEIR is slightly different than that in the DCLRDP (Figures 3-7 and 7.2 respectively) in that the DEIR figure points to two clusters of buildings as the 42 apartment unit project while the DCLRDP figure points to one of these clusters. Please correct. 77
78. The DEIR's conclusion that the housing proposed is coastal-related (see DEIR page 4.9-30 through 4.9-32) appears to be over-reaching and we cannot agree at this time on this point. 78
- Bluff Setback**
79. The Commission has made it clear (in previous actions and comments) that it expects development at the Marine Science Campus to not require the construction of shoreline protective devices in the future at this site. The DEIR states that that such structures would not be allowed by the DCLRDP (see, for example, DEIR page 4.9-44), but the DCLRDP does not contain any such prohibition (see, for example, DCLRDP policy 3.7 and implementation measures 3.7.1 and 3.7.2 on pages V-16 and 17). Please clarify and make corrections for consistency. 79
80. At the identified average annual shoreline retreat rate, the documents indicate that development should be safe for 200 years (see, for example, DCLRDP page III-7 and 8, and DEIR page 4.6-22). We have a few comments on this point. First, development is typically threatened before the retreating blufftop edge reaches development (e.g., before it reaches the foundations of buildings) and thus this safety timeframe likely overstates the number of years in this regard. Second, there are other developments much closer to the bluff edge than 100 feet (including the end of McAlister Way, the seawater utilities, ocean overlook, pathway, etc.) and the timeframe until these may be threatened is likely less than 200 years. Third, the documents should identify what response may be taken to protect any threatened structure in the future, and this needs to be made consistent with any policies about future armoring (see above). For example, response may include relocation inland (e.g., for the overlook and pathway) as opposed to shoreline armoring. Also, unless there is a corresponding mechanism to remove or move structures when they become endangered (even if that threat is not expected until one-hundred years or more hence), then it is likely that armoring will be 80

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pursued at that juncture. In any case, the documents need to provide internal consistency and clarity regarding future shoreline erosion response, and be as clear as possible about what it means to be located on an eroding shoreline over the long term. Given that there exists some specificity as to what development exists and is proposed near the shoreline, we expect that each such development should be discussed and detailed in this regard.

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Alternatives

81. The DEIR identifies the Reduced Program Alternative as the environmentally superior alternative, but it omits a site plan of this reduced building program. Please provide a site plan. Please also provide a site plan of the increased building program alternative.

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82. The DCLRDP land use diagram (DCLRDP Figure 5.2) includes areas within each planning area where the prototype site plan (DCLRDP Figure 7.2) does not identify potential building or facility locations. Please identify what, if anything, is proposed in these areas. We do not see a reason why the land use diagram would contain excess area that is more logically designated open space. Please clarify and/or correct the figures. If building, facilities, uses, etc, are proposed in these "excess areas" then they should be described in the DCLRDP.

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83. DEIR figure 5-1 shows the Modified Land Use Diagram alternative. We have several questions on this figure. First, the text describes a 100-foot buffer to YLR, but the diagram does not appear to show this. Second, the text describes moving McAlister Way to the east side of wetland W5 but the diagram does not show this. It is also not clear how McAlister would be made to connect with development in the lower terrace area. Third, the text describes a 300-foot setback in this scenario versus 100-foot in the proposed site plan. However, the diagram does not appear to show any additional setback than that shown in the proposed DCLRDP. Please clarify these issues and make any necessary corrections to the figures.

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84. We do not understand the DEIR conclusions for the project specific alternative analyses (see DEIR starting on page 5-33) that indicate that the proposed projects are in each case the environmentally superior alternative. In each case, and to lesser and greater degrees, it appears to us that the reduced project alternatives would be environmentally superior to that proposed as they would have lesser impacts than would the proposed projects. Please clarify.

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Miscellaneous General Comments

85. The DEIR references and incorporates a July 2003 DCLRDP. However, the DCLRDP delivered to our office is dated January 2004. Please confirm that the DEIR is based on the January 2004 DCLRDP or correct as necessary.

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86. The documents identify a Shaffer Road easement that appears to extend along the entire eastern boundary of the site, including the portion south of Delaware along the western boundary of the De Anza residential facility all the way to the bluff (see, for example, DEIR page 3-7 and DCLRDP page II-15). Please provide additional detail on the nature and

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- configuration of this easement; particularly to the extent that it may affect what can and cannot be developed and/or allowed within and/or adjacent to it. 86
87. The documents indicate that Shaffer Road adjacent to the campus would be widened 'consistent with City of Santa Cruz standards' applicable to this road (see, for example, DEIR page 3-26 and DCLRDP page V-23), but they don't provide the actual standards. Please provide details on the improvements proposed in this regard. 87
88. We note that the prototype building plans and studies in each document do not show the locations of all proposed building elements in site plan and elevation (showing instead a subset of the structures proposed). This omission hampers our ability to understand and analyze these projects. Please supplement the documents to provide site plans and elevations for the all components of the projects being covered. 88
89. The documents refer to the existing NOAA Fisheries building as a "phase I" building (see, for example, DEIR page 4.1-11). We are not aware of additional phases for this building. Please clarify. 89
90. The DEIR's cultural resources chapter attempts to paraphrase and refer to DCLRDP implementation measure 3.9.1, but it incorrectly identifies what 3.9.1 requires. Please clarify and/or correct. 90
91. The Commission has consistently found that the site is outside of the urban boundary, and that it acts as a transition zone between more urban areas to the east and the agricultural and rural north coast to the west. The site continues to serve in this capacity, and we expect any approvable CLRDP to provide for this as well. We are thus puzzled that the DEIR appears to indicate that the project would move the urban boundary to the west of the site (see DEIR page 4.9-29). We believe that this is contrary to the objectives for site development, and contrary to the Commission's previous findings in this regard. Moreover, such an assessment (that development proposed would be of such an intensity of use as to move the urban boundary westward) argues against approval of a CLRDP project that would result in same. Please clarify and/or correct. 91
- Miscellaneous DCLRDP Comments**
92. The DCLRDP indicates that the Commission approved the University's 1993 master plan for the site, and has reviewed projects in light of same (see DCLRDP pages 1-3 and 1-4). We are unsure to what this refers. The Commission has approved several projects on the site, and these projects likely emanated in some way from the University's master plan, but the Commission has not reviewed or approved the master plan itself, nor reviewed individual projects against it. The 1993 master plan enjoys no Coastal Act status. Please clarify and/or correct. 92
93. We are still considering the timing established in the DCLRDP's Capital Improvement Program, (DCLRDP Chapter 9) for the public access improvements, habitat enhancements, 93

circulation improvement, and stormwater system improvements. As described earlier, some of these improvements are already required and have previously established deadlines (e.g., overlooks), and others may need to be altered due to project impacts (e.g., habitat restoration). Others are yet to be identified (e.g., fencing parameters as described above). We believe it prudent to finalize such timing parameters when the nature of the approvable CLRDP program is clearer.

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94. The DCLRDP identifies certain types of additional details that remain to be developed, such as lighting details (see, for example, DCLRDP page VI-11) and sign details (see, for example, DCLRDP page VI-13). These details should be a part of the DCLRDP. If they are to be further developed post-CLRDP certification, then the CLRDP needs to be explicit that they will need to be submitted as CLRDP amendments at a future date if they are to be used to guide development on the site.

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95. DCLRDP page V-2 indicates that ancillary facilities will be allowed “as necessary” to support buildings. Use of the term “as necessary” is too broad and we recommend that such ancillary facilities are more specifically described and detailed (including upper bounds on their configuration).

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96. DCLRDP Appendix E includes a listing of previous permits and requirements of those permits. We have a couple of things to note in relation to this list. First, it doesn't appear that this list is complete. It should be supplemented to ensure that a complete listing is available. Second, the DCLRDP does not indicate what is being done to ensure continued compliance with these previous permits and conditions. The DCLRDP should be supplemented to indicate how these requirements have been or are going to be met. For the requirements that are still applicable (i.e., some are not – like requirements to submit revised plans that have long since been submitted), the document needs to provide a mechanism for ensuring that the requirements are upheld, either through specific CLRDP policies, implementation measures, or some other enforceable means.

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97. The DCLRDP includes a listing of types of development that could proceed without additional Commission notice. We are concerned that this list is much too broad to allow these categories of development to be so excluded. Either the categories of development must be more clearly defined (so it can be clearly ascertained whether they should be excluded or not) or this list needs to be omitted from the CLRDP.

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98. Finally, we believe that the DCLRDP policies and implementation measures (in Chapter 5) and the development procedures (in Chapter 8) represent a significant first step towards deriving the real nuts and bolts of implementing the CLRDP. That said, we also believe that portions of them need to be modified in ways both major and minor. Some of the modifications would be changes reflective of these comments, and some would be changes more reflective of general CLRDP implementation and procedural issues. We do not provide such suggestions here. To do so would require significant additional time and effort, and is more appropriately done in tandem with University planning staff and from common

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John Barnes, UCSC Campus Planning
DCLRDP and DEIR (SCH# 2001112014) for UCSC's Marine Science Campus at Terrace Point
April 19, 2004
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documents where changes can be tracked and shown in cross-through and underline format. We suggest that we begin such a process immediately, and further suggest that the University provide an electronic copy of the current electronic text of Chapters 5 and 8 in this regard as soon as possible (note that the discs that were provided to date proved inaccessible in this regard) to initiate such a collaboration.

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99. After we have seen additional CEQA and/or DCLRDP documents, we may have additional comments for you.

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We hope that these comments help to frame the CLRDP issues at the site, and look forward to working with you to develop the best possible CLRDP product for future submittal to the Commission for certification review. We continue to be available, within the restrictions of our limited staffing, for such consultation. If you have any questions, please do not hesitate to contact me.

Sincerely,

Dan Carl
Coastal Planner

cc: Gary Griggs, Director, UCSC Institute of Marine Sciences
Gene Arner, Director, City of Santa Cruz Planning Department
Katie Shulte Joung, Associate Planner, State Clearinghouse (SCH# 2001112014)

COMMENT LETTER SA-3: DAN CARL, CALIFORNIA COASTAL COMMISSION

Master Response SA-3: As the commenter notes, this comment letter was received several weeks after the close of the public comment period. Nonetheless, the University has made every effort to respond to the comments to the extent that this could be done without delaying the University's approval process. The University has focused on responding fully to comments on the CEQA analysis; to recommended changes to the CLRDP which, if implemented, could have implications for the CEQA analysis; and to comments which point out errors or inaccuracies in the CLRDP or the Draft EIR. The University has also responded to comments on the CLRDP which could be addressed easily within the available time. Following approval of the CLRDP and certification of the Final EIR by The Regents, the University will continue to work with Coastal Commission staff to address the remaining comments and to refine the CLRDP in preparation for consideration of the plan by the Coastal Commission.

SA-3-1: The comment posits that wetland W7 is treated as non-ESHA (environmentally sensitive habitat area) in order to justify filling the area. This is not correct. The conclusion that this tiny (43 square feet), isolated, and degraded wetland is not an ESHA is based on site-specific evidence compiled by experts through extensive on-site research.

Although wetlands are generally treated as ESHA by the California Coastal Commission, wetlands do not invariably have ESHA status, as was recognized by the California Court of Appeal in *Bolsa Chica Land Trust v. Superior Court*, 71 Cal.App.4 493 (1999). That decision recognized that the conditions of an area which was once an ESHA may be considered in determining whether it is still an ESHA. The Coastal Commission has recognized that where there is compelling site-specific evidence that ESHA characteristics are lacking, a wetland may be treated as non-ESHA.²

The characteristics of an ESHA are set forth in the Coastal Act definition of "environmentally sensitive area," Section 30107.5. It provides that an ESHA is an area in which plant or animal life or their habitats are either (1) rare, (2) especially valuable because of their special nature, or (3) especially valuable because of their role in an ecosystem. In addition, these values must be of a kind that is easily disturbed or degraded by human activities and developments.

The conclusion that wetland W7 is not an ESHA was reached by the Huffman-Broadway Group (HBG), the University's wetlands consultant, based on findings during 14 visits to the site over a two-year period. HBG made the following findings concerning the lack of ESHA characteristics of W7. The tiny wetland has limited habitat, hydrologic, and water quality functions due to its small drainage area and its isolation from other water bodies. W7 does not contain any rare or especially valuable plant or animal species and has little, if any, wildlife usage. No evidence of usage by wetland-dependent or rare, threatened or endangered species was observed. Ponding at W7 during wet weather provides a potential water source for local wildlife, but this is no different

² *Statewide Interpretive Guidelines on Wetlands and Other Wet Environmentally Sensitive Habitat Areas* (1981); *City of Malibu Local Coastal Program Land Use Plan* (September 2002) Land Use Policy 3.1.

from what is provided by any other puddle that develops onsite during the rainy season. HBG found that the long-term habitat viability of W7 is highly questionable because of its hydrologic isolation and limited functional capacity. Although HBG found that W7 can be easily disturbed or degraded by human activity (and is already disturbed and degraded), under the Coastal Act definition, this factor is material only when the plant, animal, or habitat components of the definition are satisfied, as they are not in this case.³

Because wetland W7 is not an ESHA, the Coastal Act ESHA policy, Section 30240, does not apply. Rather the principal wetlands policy, Section 30233, is controlling. Uses allowed under Section 30233 include restoration purposes, where there is no feasible less environmentally damaging alternative.

The Commission has adopted guidance for restoration projects involving fill of small, isolated wetlands that are incapable of being restored to biologically productive systems. The relevant criteria are that the wetland to be filled must be so small (e.g., less than 1 acre) and so isolated (i.e., not contiguous or adjacent to a larger wetland) that it is not capable of recovering and maintaining a high level of biological productivity without major restoration activities. The wetland must not provide significant habitat value to wetland fish or wildlife species and must not be used by any species that is rare or endangered. Restoration of another wetland must most feasibly be achieved in conjunction with filling of the small wetland. The restoration must occur in the same general area as the fill and next to a larger, contiguous wetland area providing significant habitat value to fish and wildlife that would benefit from the addition of more area. The fill must establish a stable and logical boundary between urban and wetland areas. State and federal wildlife agencies must determine that the restoration project can be successfully carried out.⁴

The CLRDP includes a wetlands restoration project to be carried out on the northwestern upper terrace, and fill of W7 would be occur only as part of that project (Draft EIR page 4.4-34; CLRDP pages V 13-14 and Appendix B, pages 32-36). At 43 square feet, W7 is well below the one-acre (43,560 sf) maximum the guidelines consider eligible for filling. W7 is not contiguous with or adjacent to a larger wetland. Rather it occupies an isolated position in the northeast corner of the site, approximately 250 feet from the nearest wetland. The site's size and isolation and the HBG findings about W7 conditions indicate that it is not capable of recovering and maintaining a high level of biological productivity even if major restoration were undertaken. The proposed restoration project would improve functional capacity of wetlands W1, W2, and W6 on the northwestern portion of the property, by integrating the hydrology of W1 and W2, enhancing vegetation, replacing filled wetland W7 on a 2:1 basis. Long-term protection of the restored and fully buffered wetland areas in the northwest and commitment of the northeastern area to necessary university functions would bring about a stable boundary between the two kinds of uses.

³ The Huffman-Broadway Group, Inc., *Investigation of the Geographic Extent of Wetlands and "Other Waters of the U.S.," on Terrace Point and Younger Lagoon Reserve, University of California, Santa Cruz* (October 2002); Huffman-Broadway Group, personal communication to Charles Eadie, UC Santa Cruz Environmental Assessment Group, January 12, 2004.

⁴ *Ibid.*

CLRDP Implementation Measure 3.2.1 provides for review and comment on the restoration plan by California Department of Fish and Game. The University has revised that implementation measure in the CLRDP by adding a provision for review and comment by the U.S. Fish and Wildlife Service, as contemplated by the Commission's guidelines.

SA-3-2: Based upon expert advice reflecting evaluation of the specific characteristics of wetland W5, the University has concluded that a 100-foot buffer is adequate to protect the biological values of this wetland and ensure that development does not degrade the habitat. Furthermore, the proposed buffers throughout the Marine Science Campus including the buffer for W5 reflect the recommendations of the Huffman-Broadway Group based on site-specific factors. W5, although designated an ESHA, is not occupied by any special status species. The biological value of this seasonal pond is primarily as a watering place for avian and terrestrial species. The provisions of the Stormwater Concept Plan would ensure that the seasonal pond continues to receive adequate amount of runoff so that it can continue to serve as a watering site. The 100-foot buffer would be adequate to keep humans away from this pond so that the use of the pond by avian and terrestrial species is not diminished. It should also be noted that the CLRDP includes not just the buffers but also numerous other measures such as restrictions that regulate the location of windows, access, lighting, signage and noise generating equipment, all of which combine to ensure that the biological values of all ESHAs, including W5, are not diminished. A wider buffer is not considered necessary.

The 100-foot buffer is also consistent with previous Coastal Commission guidance. In approving the CDFG facility on this site in 1999, the Commission explained that the most commonly used setback standard for wetlands and environmentally sensitive habitat is generally 100 feet, and that this is the buffer utilized most commonly by CDFG and recommended as a minimum buffer width by the *Coastal Commission Procedural Guidance for Review of Wetland Project (June 1994)*. It is also the buffer width approved by the Commission in the City of Santa Cruz local coastal program. The Commission's findings on the CDFG facility show that evaluation of the appropriateness of the buffer width also included factors such as shielded night lighting, absence of wetland-facing windows, vegetation, and fencing. Similar factors affecting the buffers for W5 and other site wetlands were also considered in evaluating adequacy of the buffers.

SA-3-3: HBG found no evidence of ponding or saturated soils within the major portion of the root zone of the vegetation found within the area described in the comment during the 2003 rainy season. Visual observations at intermediate locations surrounding HBG sample points 24, 58 and 59 yielded similar results regarding vegetation and evidence of surface ponding. The only exception to this is the observation of an algal mat by HBG at HBG and Terrace Point Action Network (TPAN) sampling point 59 during January 31, 2003. No algal mats were found by HBG during the January 30, 2002 sampling period for site 59.

The presence of an algal mat implies that the soil at this particular location had been ponded. The point of observation at site 59 is located adjacent to a TPAN soil pit (used by TPAN to observe wetland hydrology conditions) within the depressional area between two plowed furrows that are remnant of previous farming activities. HBG believes that given the well drained nature of the sandy loam soils of the site that the presence of saturated soils is unlikely unless the saturated

soils occurred following significantly above normal rainfall conditions (over 200 percent) such as those that occurred during December 2002. As such it is believed that the algal deposit found is a remnant of this above normal rainfall condition.

TPAN has provided photographic evidence that the area around sample sites 58 and 59 ponds. HBG believes this ponding is also the result of above normal rainfall conditions that occurred during December 2001 (greater than 100 percent). In addition, significant levels of precipitation (2.56 inches) occurred during January 1-3, 2002. The TPAN photographic data was taken on January 9, 12, 14 and 16, 2002. On January 9, 12 and 14, 2002 the photographs show ponding occurring within the depressional areas between remnant crop furrows. The January 16, 2002 photographs indicated no surface ponding. This data provides evidence that the soils at this site are draining despite the depressional topographic relief where the ponding was observed. Soil moisture data for both 2002 and 2003 sampling years indicate that no saturated soil conditions were found to occur within the major portion of the vegetation present at this site or within the general area of concern described by the Coastal Commission.

HBG believes that the area or portions thereof east of W6 and south of W8 should not be delineated as wetlands.

SA-3-4: The University will consider removal of the pavement on the existing access road at a later time. Please see Master Response to comment letter SA-3.

SA-3-5: Removal of the headwalls north of wetland W6 will be evaluated during the design and implementation of the wetlands restoration program for wetlands W1, W2, and W6.

SA-3-6: The description of wetland W1 in the EIR has been revised to “historic drainage ditch,” as the commenter recommends. Given the late receipt of the comment letter and the amount of effort that would be involved, the recommended change has not been made in the CLRDP. The CLRDP treats wetland W1 as an ESHA and the change would only be semantic.

SA-3-7: The statement on page 4.4-51 is in error and is revised as shown below.

1. “Within the upper terrace development area, habitat types include ruderal (~ 0.3 acre), non-native grasslands (~ 2 acres), coyote brush scrub-grassland (~ 2 acres) and ~~two~~one small wetland (totaling ~~63~~43 sf).”

SA-3-8: Stormwater runoff from the NOAA Fisheries building flows to an underground detention reservoir and percolation field in the buffer area of wetland W5. This percolation system handles all of the runoff in most storms, but when the system’s capacity is exceeded, stormwater from the system overflows into wetland W5. The areas of the facility that are subject to urban contamination (the parking lot) are served by drop inlets fitted with special filter materials that catch sediment and oil. A small area of the western portion of the roof and landscape area does not drain to this system and instead flows to the west into another underground percolation drain system along McAllister Way which overflows to Younger Lagoon along with run off from other parts of the terrace and overflow from wetland W5.

SA-3-9: The University believes that YLR will be adequately buffered from the development envisioned for the middle terrace area by the 35 to 50 foot resource protection buffer proposed for the portion of YLR adjoining SORACC and adjacent marine research buildings, as well as other implementation measures for the protection of environmentally sensitive habitat areas and special protection for YLR (see measures listed on pages 4.4-57 through 4.4-59 in the Draft EIR).

Although the University will consider the construction of a berm between YLR and the development on the middle terrace west of McAllister Way where possible, a berm would take up space that is needed for the development program. A more feasible alternative would be a solid fence, like the one behind the CDFG facility, which was approved by the Coastal Commission, along with native shrubs and trees as a further screen.

The site of SORACC adjacent to YLR was selected after careful consideration of a number of other sites. At this location, the outdoor marine mammal care areas would establish a quiet, low disturbance buffer zone adjacent to YLR. These animal areas and YLR would mutually benefit from a quiet area like this. To the east both the existing Marine Wildlife Center and the proposed marine mammal center would benefit from adjacencies of the facilities occupied by staff to other core marine research and education facilities as illustrated in the Prototype Site Plan. For these reasons the plan considers SORACC the best use of the site.

If this site were used to provide upland habitat, SORACC would have to be located on an interior site that would not have the right environment for marine mammal care facilities. The comment refers to a request for evaluation of this area for upland habitat, but provides no further information. The University finds no such request in the Commission's issue identification comments or other related documents.

SA-3-10: The CLRDP contains policies and implementation measures which apply to YLR, determine uses and activities allowed there, and serve to protect the resources of that area (CLRDP Implementation Measures 3.5.1 through 3.5.4 and 3.6.1; Draft EIR page 4.4-70). These provisions of the CLRDP have controlling effect in management of YLR. Based upon these provisions, the University, in conjunction with the Natural Reserve System, maintains an adaptive management plan for YLR. Further, the University is in the process of developing an update of the management plan, which will include more detailed provisions to be applied in management of Younger Lagoon Reserve resources. In connection with development of these provisions, the University will consult with Coastal Commission staff concerning suitable procedures for addressing the relationship of these YLR provisions to the CLRDP.

SA-3-11: The commenter does not specify which previous submittals he is referring to. However, the University's response to the Coastal Commission staff report on Amendment 3-83-076-A13, file on July 21, 1999, makes the following statement: "The lagoon ecosystems also contain approximately 88 native plant species and 29 non-native species (Appendix 3a). Several plant species...are rare or locally unique." The University reviewed Appendix IIIa of the 1999 submittal, which lists plant species found in the Younger Lagoon Reserve during survey projects conducted over the course of many years, and compared the list with the species listed in Table 4.4-1 of the Draft EIR, which lists special-status plants with a potential to occur in the

vicinity of the Marine Science Campus. No special-status species are included in the Appendix IIIa list. However, three of the plant species listed (*Bromus marginatus var. maritimus*, *Chenopodium macrospermum farinosum*, and *Epilobium sp.*) are included on a list of “Locally Unique Native Plants in the Santa Cruz County Coastal Zone”.⁵ *Armeria maritime* was also found at YLR; *Armeria maritime californica* is included on Morgan’s list. None of these three plant species was found in Younger Lagoon Reserve during the biotic study performed for the CLRDP. However, it is possible that these species may still be present.

SA-3-12: The Draft EIR notes that the wildlife corridor is 20 feet wide which when coupled with the 80-foot resource protection buffer, provides a 100-foot wide area that can be used by wildlife to move through the area. The Union Pacific RR right-of-way, including improved bank slope and tracks, is not counted as part of the wildlife corridor. However, this feature does provide buffering values to the corridor. Although the possibility of increased use of this right-of-way is noted, there are no firm plans for such a change at this time, and it must be considered speculative. Furthermore, even if greater use were made of the right-of-way in the future, it would still be used by wildlife as a corridor, as are other, more intensively used railroads. Most of the wildlife use is at night, when little or no railroad or bicycle use of the right-of-way would be expected.

The commenter also questions the adequacy of the 100-foot corridor outside the railroad right-of-way. A number of studies on wildlife corridors and appropriate width were reviewed. Most research on wildlife movement corridors focused on acceptable corridors for large open space tracts (national parks, Alaska wildlife refuges), or movement of large animal species (elk, caribou, Grizzly and black bear) over hundreds of miles. A recent study by Hilty and Merenlender⁶ found that where vineyards encroached into riparian corridors, or where riparian corridors were denuded, wildlife movement was reduced compared with wider riparian corridors with natural buffers adjacent to vineyards. This isn’t directly relevant to the proposed wildlife corridor at the Marine Science Campus. In the few references that did review near-urban corridors and corridors that serve smaller mammal, amphibian, reptile species, widths that approach 100 feet were considered reasonable.⁷ This is the type and size class of animal species that would be expected in the Marine Science Campus area. However, few monitoring studies have been done to assess wildlife use of these corridors. Generally several studies indicated that other corridor design issues may be more important than corridor width. These include provision of bridge or large culvert for road crossings, planting or maintaining native trees, shrubs, herbaceous plants to provide good cover and adequate food, elimination of fencing and pets or feral animals in corridor, and restricting adjacent lighting to down lighting that does not penetrate

⁵ Morgan, R., 1980. Locally Unique Native Plants in the Santa Cruz County Coastal Zone,” prepared for the Santa Cruz County Local Coastal Program.

⁶ Hilty, J.A. and A. Merenlender. 2004. Use of Riparian Corridors and Vineyards by Mammalian Predators in Northern California. *Conservation Biology*, 18:1, 126-135.

⁷ Bond, M. 2003. Principles of Wildlife Corridor Design. Prepared for Center for Biological Diversity; Lindenmayer, H.A. and H. Nix. 1993. Ecological Principles for the Design of Wildlife Corridors. *Conservation Biology*, 7:3, 627-630; Beier, P. and S. Loe. 1992. “A Checklist for Evaluating Impacts to Wildlife Movement Corridors. *Wildlife Society Bulletin*, 20: 434-440; Soule, M.E. 1991. Theory and strategy. PP. 91-104 in W.E. Hudson, ed. *Landscape Linkages and Biodiversity*. Island Press, Washington, D.C.

into the corridor. These characteristics are part of the proposed plan for the Marine Science Campus wildlife corridor.

There is a potential for California red-legged frog (CRLF) to use this corridor. However, the 300-foot reference cited by the commenter does not refer to a USFWS-recommended movement corridor width,⁸ but was documented as the largest distance frogs moved from breeding ponds or riparian water sources to uplands after a summer or early fall rain event. In fact, most frogs were found 100 feet from water body,⁹ and moved back to the breeding site within a short time. The Marine Science Campus site and wildlife corridor have no CRLF breeding sites or summer ponds or streams that would provide summer refuge habitat for frogs, so the 300 foot habitat perimeter does not apply.¹⁰ A more recent study^{11,12} found that CRLF also periodically move long distances (~2 miles) in straight-line directions, through upland habitats, from breeding ponds or streams to other aquatic features. USFWS staff was consulted during development of the CLRDP, and a copy of the Draft EIR was also provided to USFWS who did not provide any comments on this issue. The University will however continue to consult with both federal and state wildlife agencies in compliance with CLRDP Implementation Measure 3.2.1 when it implements its wetlands restoration program.

SA-3-13: The wetland and buffer areas of W2 and W6 may currently be used for wildlife movement. To the extent that that is the case, they will continue to do so, at least until the property to the east of Shaffer Road is developed. An additional wildlife corridor designation in this area is not considered necessary because with the Resource Protection designation assigned to this area, this area will not be developed and will continue to provide an open area for wildlife movement. As the commenter points out in comment SA-3-15, the designation of “wildlife corridor” would not provide any additional benefit.

SA-3-14: As discussed in the Transportation Section of the Draft EIR, the use of Shaffer Road to access Mission Street, including the construction of a railroad crossing, is not necessary to handle the traffic generated by the growth of the Marine Science Campus under the CLRDP. The project will not add traffic to Shaffer Road in the area of the wildlife corridor, and provision of corridor connectivity improvements such as bridges or culverts is not considered necessary for the proposed project. Any need for such connectivity improvements arises independent of proposed improvement on this site and lacks nexus with this project. As stated in the Draft EIR and CLRDP, the campus will work with the City to maintain wildlife corridor connectivity at the time

⁸ US Fish and Wildlife Service. 1994. Endangered and Threatened Wildlife and Plants: Proposed Endangered Status for the California Red-Legged Frog. Federal Register 59(22): 4888-4895; US Fish and Wildlife Service. 2002. Recovery Plan for the California Red-legged Frog (*Rana aurora draytonii*). Region 1, USFWS, Portland, OR. 173 pp.

⁹ Rathbun, G.B. et al. 1993. Status and Ecology of Sensitive Aquatic Vertebrates in Lower San Simeon and Pico Creeks, San Luis Obispo County, Cal US Fish and Wildlife Service, National Ecology Research Center. San Simeon, CA. Prepared for the California Dept. of Parks and Recreation. 103 pp.

¹⁰ Ecosystems West. 2001. California Red-legged Frog Site Assessment for the University of California Santa Cruz Long Marine Laboratory Coastal Long Range Development Plan. Prepared for UCSC Campus Planning.

¹¹ Bulger, J.B. 1999a. Terrestrial Activity and Conservation of California Red-legged Frogs in Forested Habitats of Santa Cruz County, California.

¹² Bulger, J.B. 1999b. Results of a Survey for California Red-legged Frogs on the Moore Creek Drainage, Santa Cruz, CA.

that the City decides to construct a railroad crossing on Shaffer Road and turn it into a through roadway to Mission Street.

SA-3-15: Eliminating the “Wildlife Corridor” land use designation would not result in a significant benefit and would require substantial revisions to the CLRDP and the Resource Management Plan. The University considers that this change is not warranted in light of the time constraints. The possible inference noted by the comment is not intended and will not be imputed.

SA-3-16: Figure 3.16, “Combined Constraints,” shows the constraints posed by existing conditions which the University took into consideration in developing the CLRDP. The wildlife corridor is not shown because it is a land use designation. Land use designations are based, in part, on constraints but are not the same thing as constraints.

SA-3-17: As explained on page 4.4-60, there are no special status plant species on the entire terrace portion of the project site. With respect to special status wildlife species, the analysis shows that only a few such species forage or otherwise use the site. Although habitat is present, repeated surveys of the site have not shown any evidence of nesting by special status birds on the terrace. Breeding habitat for special status terrestrial species is not available on the site. It is for these reasons the non-wetland portion of the terrace area is not considered ESHA. Furthermore, the analysis presented on pages 4.4-60 through 4.4-69 of the Draft EIR shows that implementation of the proposed project would not adversely affect biological resources on the project site, not just those resources that occupy or otherwise use wetlands but also those that utilize the upland areas of the site. The Draft EIR includes mitigation measures to avoid impacts to nesting birds should those be present within the upland areas of the site that would be developed. The Draft EIR also explains that abundant alternate habitat is present in the area, to the extent that it may later be determined that some of the nesting habitat is adversely affected by the project. Furthermore, as explained on page 4.4-64, the loss of about 15 acres of foraging habitat would be offset by CLRDP Implementation Measure 3.2.6, which will protect and enhance the right habitat types on the site. Furthermore, the CLRDP would establish and protect a wildlife corridor that would maintain connectivity between Antonelli Pond to the east and YLR to the west. Also see response to comment PH-4-1.

SA-3-18: The referenced section of utility corridor is a deeded easement from the Younger family which came with the original 40-acre acquisition of land from them in 1972. It occurs wholly on the Younger parcel which is County land (not City). In Figure 3-10, the corridor is incorrectly shown to be partly in City land north of the Raytech buildings. It was originally intended for access, egress, and utilities. It presently carries all site electrical and telecommunications for all of the university’s buildings, the Fish and Game Building, and the NOAA Building. Figure 3-10 has been revised to show the correct location of the corridor.

SA-3-19: More specific plans for habitat restoration/enhancement measures will be developed prior to implementation, according to the schedule presented in Table 13 on pages B-60 to B-61 of the CLRDP. These plans will utilize the guidelines for revegetation species presented in Table 3, pages B-22 to B-25 of the CLRDP.

SA-3-20: The impact on nesting raptors from construction noise and increased human activities is discussed on page 4.4-65 of the Draft EIR. In addition, the CLRDP includes Implementation Measures 3.4.1 through 3.4-3, all of which are designed to avoid or minimize impacts to protected habitat values from increased human activity and new noise sources (see page 4.4-57 of the Draft EIR).

SA-3-21: The summary of three related Coastal Act access policies beginning on page 4.9-15 of the Draft EIR is modified to include the word “maximum” after “provide.” Despite the inadvertent omission of the word in this summary, Draft EIR evaluation of the adequacy and appropriateness of the project’s provisions for public access to the coast utilized the appropriate Coastal Act standard (note that Policy 6.1 in the CLRDP states that the University will “provide maximum public access to the Coastal Resources of the Marine Science Campus to the extent consistent with public safety, fragile coastal resources, implementation of the educational and research missions of the campus, and security of sensitive facilities and research activities on the sites”). In large measure, the CLRDP access provisions reflect the Interim Access Plan approved by the Coastal Commission in 2000 and 2001 as consistent with requirements of the Act. Discussion of the access program includes citations to Section 30210, and not to the summary of the access provisions. The section is quoted in full on page 4.9-37, where additional discussion of the access program occurs.

SA-3-22: As shown on CLRDP Figure 5.5 and Draft EIR Figure 3-9, the trail that runs along the west side of wetland W4 connects to the trail coming from the north via a crosswalk across the new site access road. Connections to the trail coming from the south are provided at the northeast and southeast corners of wetland W4. Should an additional connection be required, this will be provided via pathways crossing or circling the parking lot southwest of wetland W4. CLRDP Figure 5.5 correctly shows the trail configuration relative to overlooks C and D. Figure 3-9 in the EIR has been revised to show the correct trail configuration.

SA-3-23: The last sentence in the first full paragraph on Draft EIR page 4.1-30 is revised as follows:

Public trails onsite would be designed according to intended use,¹³ with larger widths (up to 12 feet wide) and low-level pedestrian lighting designated for major pedestrian trails, and narrower widths (a minimum of ~~6-5~~ feet wide to ensure ADA compliance) and no night lighting provided unless needed for safety, designated for minor visitor use trails.

SA-3-24: The University will consider the suggestion made in this comment at a later time. Please see Master Response to comment letter SA-3 regarding the University’s consideration of the CCC’s comment letter.

SA-3-25: The University will consider the suggestion made in this comment at a later time. Please see Master Response to comment letter SA-3 regarding the University’s consideration of the CCC’s comment letter.

¹³ The CLRDP public trails design guidelines state that walks and trails on campus have two primary uses: daily use by site faculty, staff, and students to access site facilities; and visitor use for coastal access, docent-led tours, and informal interpretive walks.

SA-3-26: The University will consider the development of detailed design parameters for fencing at a later time. Please see Master Response to comment letter SA-3 regarding the University's consideration of the CCC's comment letter.

SA-3-27: The University will consider the suggestion made in this comment at a later time. Please see Master Response to comment letter SA-3 regarding the University's consideration of the CCC's comment letter.

SA-3-28: The University will address the commenter's concerns about the distribution of public access parking at a later time. Please see Master Response to comment letter SA-3 regarding the University's consideration of the CCC's comment letter.

SA-3-29: The University is proposing to charge fees for parking at the Marine Science Campus in order to provide funds for promoting transit use and for transportation demand management (Policies 5.7 and 5.8). These policies are necessary to minimize traffic and transportation impacts from development under the CLRDP. Provision of free public access parking would not be feasible under these circumstances.

SA-3-30: As the comment points out, the text on page V-27 of the CLRDP incorrectly states that Figure 5.5 shows public coastal access parking. Parking is shown on Figure 5.4. Actual spaces designated for coastal access parking have not been identified at this time. The text on page V-27 referring to coastal access parking on Figure 5.5 has been deleted.

SA-3-31: Overlooks A and E are proposed and Overlook D is an existing overlook with proposed improvements. Each is described in the Younger Lagoon Beach/Wetland Area Management and Access Plan that was accepted by the Coastal Commission at its July 12, 2001 hearing. As a condition of acceptance, the Commission required a permit application for these proposed improvements by January 1, 2002. Subsequently, because the University had begun the CLRDP process, the Commission amended this timing requirement (Permit No: 3-83-76-A18) to coincide with the approval of the CLRDP or the commission's next review of the Younger Lagoon Beach/Wetland Area Management and Access Plan (July 13, 2004), whichever occurs first. The clear intent of this timing amendment, along with the explicit statement in the UCSC/Long Marine Lab Campus Interim Access Plan which was approved by the Commission August 28, 2001, was that the Access Element contained in the CLRDP would supercede the previous requirements. The proposed development of the overlooks is consistent with the earlier interim plans with adjustments to the timing of construction to be consistent with other proposed development under the CLRDP.

SA-3-32: The overlook letter designations as represented in Appendix B, Resource Management Plan, are not consistent with the designations in the Section 9.1 of the CLRDP. The correct designation for the overlook at the terminus of McAllister Way is Overlook B. The comment on hours that this overlook is accessible to the public is noted. The campus intends to make this overlook and all of the non-controlled public access trails and overlooks open daylight hours (one hour before/after sunrise/sunset), 365 days/year.

SA-3-33: Overlook D “exists” as a destination for guided visitors or otherwise authorized personnel to view Younger Lagoon rather than as a structure. This existing overlook consists simply of a mulched pathway to a natural flat spot with bench and some visual screening provided by native shrubs.

SA-3-34: The University will address the question raised in this comment at a later time. Please see Master Response to comment letter SA-3 regarding the University’s consideration of the CCC’s comment letter.

SA-3-35: The Draft EIR is modified (page 4.9-18, after paragraph 1) to incorporate the following discussion of establishing public access to the beach and surfing area by means of a stairway down the face of the bluff.

“The CLRDP does not include provision for public access either to the beach in the lagoon area or to the pocket beaches at the foot of the bluff. Both of these routes to the beach potentially provide access to the surfing break offshore Younger Beach. The CLRDP policies reflect Coastal Act policies in providing for maximum public access to coastal resources of the Marine Science Campus to the extent consistent with public safety and fragile coastal resources, among other constraints.

“As discussed elsewhere (page 4.9-1 of the Draft EIR), public access in the Younger Lagoon Reserve area would not be consistent with protection of the reserve’s sensitive habitat resources.

“The possibility of an access stairway down the face of this 35-foot seacliff raises different issues. Some bluff-face stairways have successfully provided public access to the ocean, but a partially sheltered location is needed for the safety of persons using the stairway as well as protection of the structure itself. For example, the stairway at Pleasure Point in Santa Cruz is located on the southeast face of a promontory, providing substantial protection from ocean waves. Other bluff-face stairways in the area are located either in similar sheltered locations or are separated from dangerous wave action by a broad beach.

“At the Marine Science Campus, the near-vertical, south-facing cliffs are exposed to the direct impact of ocean waves as the small pocket beaches at the bluff toe become inundated at high tides. Even in the absence of a stairway, persons climbing on the face of these cliffs occasionally have become stranded by a rising tide, requiring rescue. Introducing a stairway at this location would expose more people to the hazards of being stranded on a disappearing beach or ascending steep and possibly damaged stairs while being buffeted by ocean waves.

“A stairway would also bring more climbers to the cliff face, possibly impairing the habitat value of the area. The bluff face is designated “resource protection,” where the primary purpose is protection of wetland and ESHA values. The coastal bluffs provide habitat for nesting birds, including the special status black swift (*Cypseloides niger*). See Draft EIR pages 4.4-10, 4.4-27, 4.4-33, 4.4-41 - 42. Introduction of a bluff-face structure and increased public presence in this sensitive area would not be consistent with implementation measures included in the CLRDP to protect the bluff environment. Draft EIR page 4.4-59.

“As discussed below, there is abundant provision for public access to the sea in this area. Surfers and beach-goers can safely access the beach at Natural Bridges, about 800 yards east of the Marine Science Campus, and at most tide stages, it is possible to walk from there to Younger Beach for access to the surfing break. In this way, the surfing areas offshore the Marine Science Campus can be reached more safely than by means of a bluff stairway.

“Considering the hazards of a bluff stairway, the priority for protection of sensitive lagoon and bluff resources, the adequacy of nearby alternative access to the coast, and the onsite provisions for other coastal access and recreational amenities, the omission of access to the site beaches is consistent with Coastal Act policies.”

SA-3-36: It is intent of the University to keep the non-controlled public access areas of the site open to the public at no charge, subject to safety, security, and time restrictions that may apply as articulated in the Public Access section of the CLRDP. It should be noted, however, that some portions of the public access facilities on the Marine Science Campus do and will involve fees, such as for admission to the Seymour Marine Discovery Center. Also as stated in response to comment SA-3-29, the University is proposing to charge fees for parking at the Marine Science Campus in order to provide funds for promoting transit use and for transportation demand management (Policies 5.7 and 5.8). The University will work with the Coastal Commission to clarify this in the CLRDP after Regental approval.

SA-3-37: The CLRDP does not propose to change the current allowable hours; it only states that the University may limit hours of access “if needed.” In effect, this is a policy basis for the current limitation on hours of access. If the University wants to pursue different hours in the future, it would do so in consultation with the Coastal Commission. The University will work with the Coastal Commission to clarify this in the CLRDP after the Board of Regents has approved the project.

SA-3-38: CLRDP Implementation Measure 6.2.6 states that bicycles will be allowed on the Marine Science Campus except on controlled access trails. This is further clarified on page V-27 and V-29 of the CLRDP, which defines public access and recreation policies. The definition of “public trails” states that these trails are intended to provide pedestrian and bicycle access. The definition of “controlled access trails” states that the primary purpose of this designation is to provide pedestrian access to overlooks. Should the Coastal Commission desire further clarification, the University will consider this further following approval of the CLRDP by The Regents.

SA-3-39: Paragraph 8, Draft EIR page 4.9-16, is modified as follows:

“Historic Access to the Project Site. As discussed in Section 4.14, ~~with the exception of the Seymour Center, which is a recreational and educational destination that attracts visitors, there are no formally established access trails or recreational uses on the project site. As discussed in more detail below, however,~~ As part of an access program in the interim before adoption of the CLRDP, the Coastal Commission has designated public-access trails through the terrace portion of the site and to overlook areas ~~on an interim basis.~~ The Commission has also recognized that ~~There is observational and anecdotal evidence that portions of the terrace, including informal trails, overlooks, and McAllister Way, have been used in the past (and currently) by the general public for walking,~~

bicycling, and viewing the ocean. In addition, surfers have been observed occasionally climbing down the bluff face to the beach below, although land owner permission for this use has not been granted and no established accessway to the sea exists. ~~There are no formally designated trails that currently exist onsite.~~ No formal access to the beach below has been provided to date due to safety concerns and the potential harm to biological resources at ~~the~~ YLR.”

Similar modification of wording will be made in other similar contexts.

SA-3-40: The University recreation facilities would likely be open to members of the public on a limited basis.

SA-3-41: The text in the 2nd paragraph on page 4.15-15 is amended to read:

“A Class I multiuse/bicycle path follows the shoreline along West Cliff Drive, and a separate Class I facility links Shaffer Road to Wilder Ranch.”

Figure 4.15-4 is modified to include the Class I path linking Shaffer Ranch to Wilder Ranch.

SA-3-42: The University believes that the visual simulations in the Draft EIR provide adequate characterization of the development under the CLRDP for the evaluation of visual impacts under CEQA.

SA-3-43: The view from the City’s Moore Creek property is evaluated in the EIR (see Figure 4.1-7). The proposed development would be visible from this location but the view corridor is not blocked. Regarding the view from the railroad right-of-way, currently there is no public access to this location and therefore no view corridor from this location that must be protected. The EIR appropriately evaluates the visual impacts relative to current conditions and does not speculate about impacts under future conditions that are uncertain at this time. The University provided CCC staff with maps showing proposed vantage points for the visual simulations in a memorandum dated November 16, 2000. Two additional vantage points were added, as requested by CCC staff in a conference call with University staff and its consultants on November 17, 2000.

SA-3-44: As the commenter notes, the Draft EIR (page 4.1-16) states that “long-range views of the site from the Bombay greenbelt property are not available.” Medium- and long-range views from the Bombay property were evaluated at the time that visual simulations for the project were prepared. In medium-range views looking south from the Bombay property’s lower terrace, the project site is visible beyond the intervening trees and Highway 1 embankment in the foreground. Figure 4.1-7 of the Draft EIR illustrates this view. At the long-range viewpoint from the upper terrace of the Bombay property, it was determined that the project site was not visible due to the intervening topography of the Bombay site itself. The long-range view looks out over the Pacific Ocean and does not include any intervening land.

For the purposes of the Draft EIR, long-range views are considered to be views from points 1 mile or more from the project site. While portions of the project site may be visible from points on the Bombay property that are more than one mile from the project site, the Draft EIR’s

conclusion that long-range views “are not available” is generally accurate. Note that the Draft EIR provides a panoramic visual simulation of the proposed project from a “medium-range” vantage point on the Bombay property that clearly shows the visual scope and scale of the entire CLRDP project (see Draft EIR Figure 4.1-7).

SA-3-45: Comment noted. No response is necessary.

SA-3-46: The campus will consider the details requested by the commenter at a later time. Please see Master Response to comment letter SA-3 regarding the University’s consideration of the CCC’s comments.

SA-3-47: The campus will consider this request at a later time. Please see Master Response to comment letter SA-3 regarding the University’s consideration of the CCC’s comments.

SA-3-48: Underground parking is not feasible due to its cost (approximately \$50,000 per vehicle space). At the Marine Science Campus, mudstone bedrock is less than 9 feet from ground surface. Excavation for an underground parking structure in this bedrock would be costly and could require blasting. Also assuming a three-level parking structure, excavations up to 30 feet deep would be required. Any excavations that are 30 feet below ground at this site would intercept groundwater and possibly disrupt groundwater patterns, and thereby affect the seeps in YLR and the sea cliffs.

SA-3-49: Please refer to Figure 4.6 and 4.7 in the CLRDP (page IV-13) which shows the windrows similar to those that could potentially be included in the development projects. Similar to other windrows along the coast, they would be oriented north-south so as to serve as wind breaks and also to minimize the interruption of views. Decisions about the design of windrows will be made during the design review of specific projects. Tree species to be planted in these windrows will be similar to the ones commonly used in windbreaks in central California coastal areas.

SA-3-50: Errors are noted in Figure 6.3, Existing Building Heights on page VI-3 of the CLRDP. According to construction documents, the actual existing building heights are as follows: the NMFS Building is 36’ high from finish floor to highest ridge. Note that isolated stair well peaks are higher. Seymour Marine Discovery Center is 25’ high from finish floor to highest ridge height. Note that isolated mechanical and skylight monitors are higher. The errors have been corrected in the CLRDP.

SA-3-51: As the commenter notes, the County of Santa Cruz Local Coastal Program contains policies (5.10.3 and 5.10.11) for protection of “significant public vistas” and “viewsheds of rural scenic roads” when development is “unavoidably” sited within these vistas and viewsheds. In the case of the CLRDP, development within such vistas and viewsheds would be “unavoidable” due to both (1) the nature of the project, as a marine science campus that requires ocean access; and (2) the nature of the project site, a flat, highly visible property without areas where development could be “hidden.”

The Project Description chapter of the Draft EIR lists project objectives that explain the University's goals of developing a world-class marine research campus with access to large volumes of fresh seawater and proximity to the ocean environment (see Draft EIR pages 3-10 through 3-12). The campus would also need to adjoin existing Marine Science Campus facilities and be close enough to the UCSC main campus to allow integration of programs. The project objectives also note the need for certain facilities such as equipment storage, maintenance, and outdoor laydown areas, lecture halls, meeting places, and support housing. All of these factors suggest that meeting the University's project objectives would require both development on the project site (rather than on some other site) and a certain level of development sufficient to create a world-class marine research campus.

The Alternatives chapter of the Draft EIR (Chapter 5) reviews potential alternatives to the project, including preliminary alternative site plans considered by the University, possible offsite alternatives, and alternatives evaluated in detail in the Draft EIR. As explained in the Draft EIR (pages 5-5 through 5-6), the University rejected various preliminary alternative site plans in part due to their potential to intrude on important views or natural areas, result in more conspicuous urban development, or disturb more of the site. Offsite alternatives would fail to meet the main project objectives, and therefore were not included for further analysis. Among the development alternatives evaluated in detail in the Draft EIR are options for reduced and increased building programs, a modified land use diagram, and project-by-project development. The Draft EIR concludes that none of these alternatives would noticeably reduce the amount of development visible from offsite viewpoints, and all but the reduced program alternative could result in greater visual impacts than the proposed project.

These conclusions suggest that the configuration and siting of development proposed by the CLRDP are "unavoidable" if the University is to attain its project objectives. The CLRDP Combined Constraints Map (Figure 3.16 of the CLRDP) further illustrates the major constraints that limit the developable areas of the project site and that were taken into account in preparing the CLRDP. As shown on the map, major development constraints include wetland and riparian areas, beach and coastal areas, and agricultural setbacks and other buffers.

County of Santa Cruz Local Coastal Program Policy 5.10.3 states as follows (in part): "Provide necessary landscaping to screen development which is unavoidably sited within these (significant public) vistas." The Draft EIR (Table 4.9-2, page 4.9-46) indicates that the CLRDP would be consistent with Policy 5.10.3 because "the proposed CLRDP would cluster new development within three development areas onsite, would implement building height restrictions and standard setbacks, and would include screening landscaping consistent with the CLRDP landscape design guidelines in order to preserve and maintain important view corridors of and across the site to the ocean, adjacent agricultural land, and hillsides." This analysis appears adequate and reasonable given the further discussion above explaining why CLRDP development would be "unavoidably sited" as proposed.

Similarly, County of Santa Cruz Local Coastal Program Policy 5.10.11 states as follows (in part): "Where proposed structures on existing lots are unavoidably visible from scenic roads, identify those visual qualities worthy of protection (See policy 5.10.2) and require the siting, architectural

design and landscaping to mitigate the impacts on those visual qualities.” The Draft EIR (Table 4.9-2, pages 4.9-46 and 4.9-47) concludes that the CLRDP would be consistent with Policy 5.10.11 based on the following explanation: “Although the portion of Highway 1 immediately north of the site is not designated a scenic road because for about 2,000 feet the road is below grade and no ocean views exist, the project site is visible from a vantage point located northwest of the site on Highway 1 (marker #21.51).” The CLRDP design guidelines would help to ensure that new visible development is sensitive to the coastal rural agricultural architecture of the area. In addition, proposed landscaping and windbreaks would screen new development while maintaining a visual connection to the open space areas nearby.” This analysis also appears adequate and reasonable given the further explanation of “unavoidable siting” provided above.

SA-3-52: Comment noted. No response is necessary.

SA-3-53: The October 2003 Stormwater Concept Plan (SCP) is an editorially refined version of the June 2002 SCP. The Draft EIR impact analyses are based on correct and appropriate SCP data.

SA-3-54: The University will address these comments at a later time (please see Master Response to comment letter SA-3 regarding the University’s consideration of the CCC’s comments). The University will work with the CCC to develop water quality performance standards after The Regents have approved the CLRDP. The details of the design of drainage detention and treatment facilities will be developed during the project design phase. Additional details are not necessary for the CEQA analysis.

SA-3-55: See response to comment SA-3-54.

SA-3-56: See response to comment SA-3-54.

SA-3-57: See response to comment SA-3-54.

SA-3-58: See response to comment SA-3-54.

SA-3-59: Drainage Planning Area D consists of drainage basins 7 and 8. Basin 7 is fully developed with the existing Fish and Game Marine Wildlife Center; therefore, alterations of the drainage system in that basin are not planned. Basin 8 represents a modest-sized drainage area located uniquely to accommodate outdoor marine mammal care areas that are adjacent both to like uses at the south and west zones of the Marine Wildlife Center, and to a quiet, low-disturbance buffer zone for Younger Lagoon Reserve. These animal areas and YLR mutually benefit from a quiet area such as this. To the east both the existing Marine Wildlife Center and the proposed marine mammal center would benefit from adjacencies of the people spaces of the facilities to other core marine research and education facilities as illustrated in the Prototype Site Plan. For these reasons the plan considers this the best use of the site. The outdoor marine mammal yards must all be designed to contain seawater run off from animal pools. Therefore, stormwater from the outdoor mammal yards that would otherwise discharge to the stormwater system, will instead be directed to the existing seawater return system, reducing the stormwater

volume which would otherwise need to be regulated. Because of the reduced volume of stormwater that would be discharged from the SORACC site and in order to save the area for critical research and animal holding facilities, the Stormwater Concept Plan proposes the use of the more compact conventional stormwater treatment in this basin.

SA-3-60: Please see responses to comments SA-3-54 through SA-3-58.

SA-3-61: Please see responses to comments SA-3-54 through SA-3-58.

SA-3-62: Please see responses to comments SA-3-54 through SA-3-58.

SA-3-63: Please see responses to comments SA-3-54 through SA-3-58.

SA-3-64: Please see responses to comments SA-3-54 through SA-3-58.

SA-3-65: Please see responses to comments SA-3-54 through SA-3-58.

SA-3-66: The University will consider addressing the quality of the water flowing onto the site from upstream sources at a later date (please see Master Response to comment letter SA-3 regarding the University's consideration of the CCC's comments). This issue is related to existing conditions and will not be affected by the proposed project. Therefore, it is not necessary to address it as part of the CEQA process.

SA-3-67: Since the publication of the Draft EIR, Long Marine Laboratory has been enrolled under a new California Regional Water Quality Control Board General Permit for Discharges from Aquaculture and Aquariums, General Permit No. CAG993003. The monitoring and reporting program under this permit requires the University to monitor and report quarterly (some parameters are required semi-annually) on the following parameters: settleable solids, total suspended solids, net total suspended solids, turbidity, Net turbidity, pH, temperature, dissolved oxygen, BOD, grease and oil, ammonia, nitrite, nitrate, total coliform, fecal coliform, and Enterococcus. New outdoor seawater use areas, such as new marine mammal pool areas and outdoor seawater tank research areas, will discharge stormwater along with seawater from the seawater containment areas in these outdoor areas. The Stormceptor® unit is an underground hydrodynamic separator that can be installed with an existing or new pipe conveyance system to separate oil, grease, and sediment from stormwater runoff. An inflow weir directs runoff through a drop pipe into a lower treatment chamber where sediment, oil, and grease are separated from the flow by gravity. During large storm events, a bypass weir conveys excess stormwater through the system without treatment, and without flushing previously collected materials. According to the U.S. EPA Region 1, the Stormceptor® system is capable of removing 52 to 99 percent of total suspended solids, depending on the sizing, and is designed to remove at least 90 percent of oil and grease.¹⁴

SA-3-68: Implementation Measure 2.3.2 (page V-12 of the CLRDP) requires that a minimum of 30 percent of the land within each drainage basin be free of impervious surfaces.

¹⁴ <http://www.epa.gov/NE/assistance/ceitts/stormwater/techs/stormceptor.html>

SA-3-69: The commenter asks whether the site was evaluated to test whether it has an annual carrying capacity equivalent to at least one animal unit per acre as defined by the United States Department of Agriculture. As background for the Draft EIR, this test was applied to the Elkhorn sandy loam #132 soil on the project site, the only soil classified as prime soil by the California Department of Conservation, Division of Land Resources Protection, provided that the soil is irrigated. Since the land has not been used for grazing, the analysis concluded that the carrying capacity test would not apply for purposes of the evaluation required in the EIR. Please also see Master Response SA-3.

SA-3-70: Consultation with the adjacent property owners during the preparation of the Draft EIR revealed concern regarding potential conflicts between the proposed development on the campus site and the adjacent agricultural operations. In light of this concern, the University has proposed to establish a fence that would keep people on the Marine Science Campus from intruding into the adjacent agricultural lands. To avoid potential inconsistency of this fence with the aesthetics of the area, plantings are proposed such that at full development, the landscaped fence would appear similar to a windrow, a feature that is commonly seen in the agricultural areas along the coast.

SA-3-71: The commenter is correct in stating that the Marine Science Campus is already “hooked up” for water service provided by the City of Santa Cruz Water Department. Existing onsite uses such as the Long Marine Lab (LML), the Avian Facility, and the Marine Discovery Center have been receiving treated potable municipal water through a 10-inch connection to a 12-inch municipal water main at Delaware Avenue and Schaffer Road since 1998. Along the North Coast, the water department historically provided untreated water for agricultural users through its coast water main. No new connections to this main have been permitted since the late 1960s, and in the mid-1990s, the water department completed a pipeline project to provide municipally treated, potable water to existing residential uses formerly served by the coast main. This pipeline was sized to serve only those existing residences on that line, and no additional residential hook-ups to the North Coast potable water main were permitted.

For purposes of the LESA analysis in Appendix B in the Draft EIR, Scenario 2 concludes that agricultural use would not be feasible due in part to prohibitive costs for irrigation water and lack of onsite water delivery infrastructure when balanced with the site’s prospective crop yields. Given existing hook-up restrictions to the North Coast main, the site would not be able to utilize water from this source. However, according to the water department, agricultural uses could be served by the existing connection to the municipal main at Delaware Avenue and Schaffer Road, though the agricultural operator would be required, as stated in the LESA analysis, to pay a “system development charge” (also referred to as a “hook-up fee”) for this supplemental use.

Above and beyond the system development charge, the agricultural operator would also be assessed a fee for “readiness to serve.” This fee is a standard fee levied on every customer and is related to the size of the meter. The “readiness fee” of \$1,238 is an annual fee, billed bi-monthly, and is a function of the meter size; in this case, the analysis assumes a 2-inch connection. In addition, fees would be assessed for the volume of water consumed on the site for crop irrigation, which is approximately \$2.30 per Ccf (hundred cubic foot). The costs and fees pertaining to the

provision of irrigation water to the project site are accurately represented in the Draft EIR, Appendix B, pages B-3 and B-5.

The Draft EIR (page 4.16-2) states that there are currently no service restrictions. As new uses are developed over time, UCSC would be required to hook the new facilities up to the site's water main. Should the water department determine that a larger hook-up is required to serve the site's uses, additional fees may be required at that time for a larger meter.¹⁵

SA-3-72: For the northern third of the project site, the CLRDP proposes a 300-foot setback for new occupied non-residential structures from the boundary with Younger Ranch (residential structures must be set back 500 feet). The 300-foot setback is larger than setbacks used by jurisdictions in the region. This setback is included as a response to a current state of California requirement for a 300-foot setback where the pesticide Telone II is used. If the California standard is changed to reflect the current federal requirement for a 100-foot setback, or otherwise changed, the rationale for the 300-foot setback will no longer exist. In that case, the CLRDP setback requirement will be changed to maintain compliance with the California requirement, except that the setback will not be reduced to less than 200 feet, which is the upper end of regional agricultural setback standards. This procedure will maintain consistency with pesticide regulatory requirements and with standards used in comparable regional settings, while providing for administrative efficiency and certainty in the planning process. The effects of the CLRDP are thus evaluated on the basis of a setback of no less than 200 feet for the northern third of the site.

SA-3-73: The Draft EIR provides an extensive explanation of why support housing is proposed as an element of the CLRDP (see pages 4.9-31 and 4.9-32 and pages 5-8 and 5-9). This housing is an integral component of the overall integrated research and education functions to be carried out on this site, and is not comparable to private residential uses elsewhere in the City, cited by the commenter. The distinction between private and public residential uses is recognized under the Coastal Act. The low coastal land use priority assigned by Section 30222 to residential uses is expressly limited to *private* residential uses. Commission regulation, 14 CCR Section 13502(c), recognizes housing as a part of an educational institution. On this research-oriented campus, the case for the integral relationship is exceptionally strong.

The CLRDP limits coastal-related support facilities, including housing, to the east and north areas of the site, farthest from the sea. Coastal-dependent research and educational uses may be sited closer to the sea (CLRDP Implementation Measure 2.4.2, pages V-6, V-10, V-12). This siting hierarchy is in keeping with location criteria of the cited Coastal Act definitions. It is also consistent with Section 30255, which gives coastal-dependent development priority over other developments on or near the sea and provides for siting coastal-related developments within reasonable proximity to the coastal-dependent uses they support.

The Coastal Act does not explain what is meant by "on the sea" or "adjacent to the sea," terms used in the Act's definition of "coastal-dependent," but the wording indicates that more than

¹⁵ Sherry Reiker, Santa Cruz Water Department, personal communication, August 19, 2004; Lynette Abbott, Santa Cruz Water Department, personal communication, August 19, 2004.

general proximity to the sea is involved for an area to be reserved for coastal-dependent uses. The areas designated by the CLRDP for support housing are neither on nor adjacent to the sea. With the exception of caretaker housing, they are removed from the shoreline by at least 500 yards. The housing would thus be located within reasonable proximity of coastal-dependent research and education uses, in keeping with Section 30101.3. Regarding the siting of caretaker housing, see the response to comment SA-3-74.

The Draft EIR examined and rejected a Partial Off-site Alternative which essentially would eliminate some of the support uses such as support housing from the Marine Science Campus site. Because only a minimal amount of housing is included in the CLRDP and removing this element entirely from the development program would seriously undermine the chances of the Marine Science Campus developing as a world-class marine research institute, an alternative with no housing element was not carried forth in the EIR.

SA-3-74: Please note that the replacement caretaker housing units are proposed at the site of the existing modular caretaker unit and would be a building that is only 200 square feet larger than the existing modular unit. The modular unit has been located near the main seawater system controls since 1980, under a series of temporary permits issued by the Coastal Commission. The University believes that this location is an appropriate place for this use over the long term. Housing the caretakers for Long Marine Laboratory adjacent to the controls for the primary seawater system is critical for effective responses to seawater system problems when regular UCSC staff is off duty. The continuous operation of the seawater system is critical to ongoing research endeavors and to marine animal and plant health at the site. For example, Long Marine Laboratory caretakers are the first responders to any problem with the system, and in times of extreme sea conditions or system mechanical problems the on-duty caretaker is often called on to monitor, respond to alarms, and manipulate the system intermittently throughout the night. Further, the caretaker housing is located adjacent to the existing outdoor marine mammal area which is an area of high security concern, and is located near the heart of Long Marine Laboratory facilities where the caretakers are easily accessible to researchers and staff who discover problems or need assistance after hours. For these reasons, the University believes that placement of this very specific type of support housing on the lower terrace is in keeping with the use priorities. Relative to public access views and site aesthetics, note that this portion of the lower terrace is developed with the mammal pools, structures associated with the seawater system, the laboratory building and the berm that encloses all this development on the west. As a replacement structure that is not much larger than the existing modular unit, the replacement caretaker housing will not significantly alter views in this area. Please note that the replacement caretaker housing is a long-term project under the CLRDP. In the foreseeable future, the University will maintain the existing modular units at the current site. The continuation of this existing use at this site is consistent with the CLRDP Land Use Diagram.

SA-3-75: The housing assignments will be based on a management plan giving priority to groups identified by the Marine Science Campus, which will include those whose research effectiveness or learning experience would be enhanced by presence on the campus during extended hours. See a more extended explanation on page 4.9-32 of the Draft EIR. The University anticipates that

by the time the short-term projects are built out the housing would be over-subscribed by qualifying persons from the Marine Science Campus. However, as stated in CLRDP Implementation Measure 2.4.1, other University housing needs would be accommodated on an interim basis in the event of occasional under-subscription of the Marine Science Campus units.

SA-3-76: The details requested in this comment will be addressed at a later time. See Master Response to comment letter SA-3.

SA-3-77: Figure 3-7 of the Draft EIR correctly identifies both clusters of 42-apartment/townhouse buildings. Figure 7.2 in the CLRDP has been corrected.

SA-3-78: Comment noted.

SA-3-79: Comment noted. The commenter is correct that the CLRDP does not contain a provision specifically prohibiting construction of shoreline protective devices. CLRDP Policy 3.7 does state, however, that the University will not allow new development that creates or contributes to erosion or instability or substantially alters natural landforms along the bluffs; this provision reflects the language in Coastal Act Section 30253(Item 2). Furthermore, as discussed on pages 4.9-35 and 4.9-44 of the Draft EIR, the CLRDP (Implementation Measure 3.7-1) provides for a 100-foot setback for buildings and facilities along the coastal bluff in recognition of potential geologic coastal cliff erosion and to minimize the risk to human life. Development in the cliff setback would be limited to existing streets, existing and proposed pedestrian and bicycle pathways, and infrastructure improvements such as seawater system facilities that are consistent with the CLRDP. Additionally, to protect the bluffs from increased erosion and the need for protective devices, native coastal bluff vegetation would be expanded and enhanced onto the terrace. These provisions would effectively ensure that no development that would require a shoreline protective device (e.g., seawall) would be allowed on the lower terrace.

To clarify this point, the Draft EIR text is revised as follows:

Page 4.9-35, second paragraph, sixth sentence – revise to state as follows:

Additionally, to protect the bluffs from increased erosion and the need for protective devices, native coastal bluff vegetation would be expanded and enhanced onto the terrace, ~~and~~ These provisions would effectively ensure that no development that would require a coastal protection structure (e.g., seawall) would be allowed on the lower terrace.

Page 4.9-44 (Table 4.9-1), second paragraph in third column (project consistency with 30253), fifth sentence – revise to state as follows:

Protective structures or other devices that would alter natural landforms along the bluffs would not be ~~allowed~~ necessary under the CLRDP.

SA-3-80: The University will consider revisions to the CLRDP regarding protection of existing structures at a later time. The concerns raised in this comment do not relate to significant environmental effect and therefore it is not necessary that they be addressed during the CEQA process. Please see the Master Response to comment letter SA-3.

SA-3-81: The site plan for a reduced program would be similar to the land use diagram presented for the proposed CLRDP. As described in the Draft EIR on page 5-12, the upper terrace development area would be unchanged. With respect to the middle and lower terrace development areas, these polygons could be maintained as is under this alternative but the density of development within these areas would be lower. Alternately, the polygons could be reduced in response to the reduced marine research space.

With respect to the increased program alternative, please see page 5-21 in the Draft EIR which describes how an increased program could be accommodated: either by increasing the density of development within the three development polygons, or by expanding the three polygons, or by using a combination of the two approaches.

Graphical presentations of these alternatives are not considered necessary as the likely impacts of these alternatives can be characterized and analyzed without graphics.

SA-3-82: The figures in the CLRDP and the Draft EIR present a prototype site plan which shows likely number of new buildings, their possible (although not final) orientation and placement, intervening open space, and areas for landscaping and circulation. Because the plan is a prototype, it also provides room for adjustments to the location of the proposed structures that may be necessary at the time that detailed plans for each of the buildings are developed. Therefore, some of the areas where no buildings or facilities are shown at this time on the prototype site plan could be occupied by a building or facility as the detailed plans of individual projects are developed. No “excess” areas are included in the site plan.

SA-3-83: Figure 5-1 which shows the Modified Land Use Diagram was prepared mainly to show graphically which areas would be excluded from development under this alternative and which additional areas would be developed – it was not intended to show all the details of this alternative such as a realigned McAllister Way. The figure shows a 100-foot buffer from YLR in areas where existing development would not preclude such a buffer. Provision of such a buffer is feasible in the lower terrace area and in a very limited portion of the middle terrace. In all other areas near YLR, there is existing development and the buffer is smaller. With respect to the 300-foot buffer from bluff top under this alternative, because Seymour Center is already developed at its present location, the change in the lower terrace development area as a result of this greater setback is limited to the southeastern corner of the development area. This is shown by the hatched area in Figure 5-1 with the southern portion of the hatched area deleted from the development area due to the 300-foot bluff top setback, and the northern portion deleted on account of a wider buffer around wetland W5.

SA-3-84: As explained in the Draft EIR under the discussion of the environmentally superior alternative for the five proposed projects, the reduced project alternative in each case would reduce some of the impacts of the proposed project, but would also reduce the environmental benefits from marine research opportunities provided by the specific projects as proposed. In the case of the 42 Apartment/Townhouse Units project, the reduced project alternative would result in a higher number of daily vehicle trips and associated air and noise emissions. Therefore, on balance, the proposed projects were found to be environmentally superior.

SA-3-85: The January 2004 Draft CLRDP is an editorially refined version of the July 2003 Draft CLRDP. The Draft EIR impact analyses are based on correct and appropriate data from the draft CLRDP.

The third sentence in the fourth paragraph of Draft EIR page 1-1, and the third sentence of the fourth paragraph on Draft EIR page 2-1, are revised to read as follows:

The Draft CLRDP was published in July 2003, and an editorially revised version of the Draft CLRDP was published in January 2004.

The following is added to the Draft EIR as the 19th bibliographic reference on Draft EIR page 9-9:

UC Santa Cruz, "Marine Science Campus Coastal Long Range Development Plan,"
January 2004

SA-3-86: The Shaffer Road right-of-way is 52 feet wide, with the western edge of the existing 24-foot-wide roadway along the centerline of the right-of-way. Figure 2.26 on page II-17 of the CLRDP and Figure 3-3 on page 3-7 of the Draft EIR incorrectly show the right-of-way centered on the centerline of the existing roadway. These figures have been revised to correct this error. The University recognizes the existence of the right-of-way on University property and the City's intention to widen Shaffer Road in conjunction with extending the road across the railroad tracks. Accordingly, Figure 7.2 on page VII-3 of the CLRDP and Figure 3-7 on page 3-19 of the Draft EIR correctly show the road widened to the full width of the right-of-way, with the proposed support housing set back from the widened road. To further clarify the University's recognition of the right-of-way, CLRDP Figures 3.16 (page III-24), 5.2 (page V-7), 5.5 (page V-28), and the enlarged Land Use Diagram have been revised to reflect the presence of the right-of-way. The right-of-way extends south of Delaware Avenue to the edge of the bluff, as shown on Figures 2.26 of the CLRDP and Figure 3-3 of the Draft EIR; however, the University understands that the City does not have plans to extend Shaffer Road south of Delaware Avenue.

SA-3-87: See the response to comment SA-3-86. The standards the road widening must meet will be determined by the City during the design process.

SA-3-88: The Draft EIR covers the planning document, the CLRDP, as well as the five near-term projects. The CLRDP building studies show details for the near-term projects only, and not all future development at the site. With respect to the five near-term projects, the CLRDP provides approximate layouts of structures that would be built associated with each project, and elevation drawings which show how these structures would generally appear. For the five near-term projects, all building elements are shown in Figures 3-11 through 3-15. No facilities associated with the five projects were overlooked in the CLRDP and Draft EIR graphics.

SA-3-89: While various high-level administrators within NOAA Fisheries have expressed interest in future expansion of the Santa Cruz lab, no formal planning has been undertaken on their part to date and the nature of any future development is speculative at this time. Nonetheless, in the context of the CLRDP, it makes sense to accommodate such a possibility, just

as it does to plan for other even less defined future needs for marine research and education space. The CLRDP identifies 254,500 square feet of additional marine research and education use; if NOAA chooses to pursue a second phase, the associated square footage would be a part of this additional square footage.

SA-3-90: Section 4.5, Cultural Resources, of the Draft EIR does not incorrectly identify what CLRDP Implementation Measure 3.9.1 requires, although the commenter is correct that the Draft EIR paraphrases the implementation measure rather than reprinting it in its entirety. The full text of Implementation Measure 3.9.1 (Construction Monitoring) is as follows:

Should archaeological resources be disclosed during any construction on the Marine Science Campus, all activity that could damage or destroy these resources will be temporarily suspended until the site has been examined by a qualified archaeologist and mitigation measures have been developed that address the impacts of the project on archaeological resources. Such mitigation measures shall be reviewed by the State Office of Historic Preservation and approved by the Executive Director of the California Coastal Commission.

This measure is sufficient to address potential impacts on archaeological artifacts and habitation sites. Impact 4.5-1 and the accompanying Project-Specific Mitigation Measure 4.5-1 of the Draft EIR (page 4.5-8) identify the additional possibility of discovering Native American burial sites and the specific procedures that would need to be followed in that event. See also response to comment I-4-45.

SA-3-91: As the comment notes, the Coastal Commission in previous actions has considered the site to be outside the urban boundary recognized by the Commission. Instead, the Commission has viewed the site as a transition zone between more urban areas to the east and agricultural uses to the west.

The CLRDP includes objectives, planning principles, policies, and design guidelines that indicate the developed campus will provide a transition between the adjacent urban and agricultural areas. The plan provides for clustering of structures, restrictions on height and placement of structures to preserve open space and scenic vistas, long-term protection of resource areas, and design and materials guidelines harmonious with the adjacent rural landscape (see pages V-11 through V-21 of the CLRDP).

The discussion on page 4.9-29 in the Draft EIR focuses on the role the campus will play in stopping the westward extension of urban development and stabilizing the boundary with agricultural uses. The plan proposes to achieve these objectives through long-term commitment of the site to a relatively low level of development interspersed with protected open space, limiting utility extensions to project needs, and establishing a utility prohibition zone along the property's western border. In the context of that discussion, references to an urban boundary reflect only semantic differences, and not real differences with the concept of the developed campus as a transition zone. The plan proposes a mix of development and open space in a broad swath of land that has agriculture to the east and urban uses to the west. The campus will thus have a transitional function, regardless of where the "urban boundary" may be considered to fall.

SA-3-92: The comment is correct: the 1993 Master Plan for Long Marine Laboratory enjoys no formal status with the Coastal Commission. The CLRDP text on pages 1-3 and 1-4 has been corrected accordingly. However, the Coastal Commission reviewed and commented on the EIR for the Master Plan as a responsible agency under CEQA, and relied upon that EIR for several subsequent Coastal Development Permits. In this sense, the Master Plan did play a role as a reference document for Coastal Commission actions at Long Marine Laboratory.

SA-3-93: The University will consider the suggestions made in these comments at a later time. Please see Master Response to comment letter SA-3 regarding the University's consideration of this letter.

SA-3-94: See response to comment SA-3-93.

SA-3-95: See response to comment SA-3-93.

SA-3-96: Previously issued permits for the campus are provided in CLRDP Appendix E for background information. The permits apply to facilities that are already in place. The CLRDP will not supersede these permits and is not dependent on them and they are not relevant to the CEQA process. The University continues to implement and monitor the permit conditions as required by the permits and will report on this compliance through a separate process if requested by the Coastal Commission.

SA-3-97: CLRDP Section 8.3 is modified as shown below.

Pursuant to Sections 13550 (a) of the California Code of Regulations and 30610 of the California Coastal Act, the following forms of development are excluded from the requirements of Section 8.2, except where they occur on tide or submerged land, beach, immediately adjacent to the beach or mean high tide line, all lands and waters subject to the public trust."

A. Delete.

B. Delete.

D. Modified as follows:

"Improvements to existing structures, including attached fixtures and signs, attached structures, and landscaping in the immediate vicinity ~~alterations and additions to structures and new signs,~~ provided all the following requirements are met."

E. Delete.

F. Delete.

SA-3-98: The University will be initiating discussion with the Coastal Commission in the near future.

SA-3-99: Comment noted. No response is necessary.

AMBAG

ASSOCIATION OF MONTEREY BAY AREA GOVERNMENTS

UCSC

MAR 18 2004

Campus & Community Planning

March 15, 2004

Mr. Charles Eadie
University of California, Santa Cruz
Environmental Assessment Group
515 Swift Street
Santa Cruz, CA 95064

**Re: MCH # 030408 – Notice of Availability of Coastal Long Range Development
Plan/Draft Environmental Impact Report for UC Marine
Science Campus, 100 Shaffer Road**


Dear Mr. Eadie:

AMBAG's Regional Clearinghouse circulated a summary of notice of your environmental document to our member agencies and interested parties for review and comment.

The AMBAG Board of Directors considered the project on **March 12, 2004** and has no comments at this time.

Thank you for complying with the Clearinghouse process.

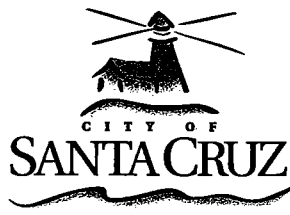
Sincerely,



Nicolas Papadakis
Executive Director

COMMENT LETTER LA-1: NICHOLAS PAPAKAKIS, AMBAG

LA-1-1: The Association of Monterey Bay Area Governments indicates that it considered the project and has no comments on it. No response is required.



OFFICE OF THE CITY MANAGER

809 Center Street, Room 10, Santa Cruz, CA 95060 • (831) 420-5010 • Fax: (831) 420-5011 • www.ci.santa-cruz.ca.us

March 19, 2004

Mr. John Barnes
Environmental Assessment Group
University of California at Santa Cruz
515 Swift Street
Santa Cruz, CA 95060

**RE: Draft Environmental Impact Report for the UCSC Marine Sciences Campus
Coastal Long Range Development Plan (SCH #2001112014)**

Dear Mr. Barnes:

Thank you for the opportunity to review and comment on the Draft Environmental Impact Report (DEIR) for the Marine Sciences Campus Coastal Long Range Development Plan (CLRDP). The City remains pleased that the University purchased the "Terrace Point/Long Marine Lab" property, thereby providing a greater opportunity for development of a comprehensive marine research center at this unique location in Santa Cruz. As you know, since the time of the purchase the City has participated where possible in long-term planning efforts for the site by a variety of means. City staff and Councilmembers participated in a Development Planning Committee early on. Various letters from past mayors and staff have been sent to the University and the Coastal Commission representing the City's general support for the University's direction and pointing out items the City would like addressed in the planning process. We continue to appreciate the opportunities to participate.

The following comments are offered in response to the DEIR, tailored to areas of City responsibility or potential impacts on City resources and infrastructure. Staff from the Public Works, Fire, Water, and Planning and Community Development Departments has reviewed relevant sections of the DEIR and provided comments compiled in this letter.

Mr. John Barnes
 March 19, 2004
 Page 2

Please consider the following items:

1. Long Range Development Plan (LRDP) and Cumulative Impacts—Table 4.0-1 lists the recent and probable future projects in the City of Santa Cruz that form the basis for the assessment of cumulative impacts. This table omits a significant probable future project in the City, which is the new LRDP for the UCSC main campus, now under development. This project should be added to the list and factored into the assessment of cumulative impacts. As well, the City is currently processing an application for a large home improvement store (Home Depot) at 2200 Delaware Avenue, in the former Lipton Tea building. Impacts from this project should also be factored into the cumulative analysis. 1

2. Water Demand—It is not clear from reading the report whether the anticipated water demand of 19.8 million gallons per year for the entire development program presented in Table 4.16-3 includes current water demand at the site of 6.5 million gallons per year, as indicated in Table 4.16-1, or is in addition to the amount presently being used. Review of the projects listed suggest that the water demand from existing buildings at the site is not being counted in Table 4.16-3, meaning that the total water demand on the site would be approximately 26.3 million gallons per year. If this is the case, Table 4.16-3 should be revised to include a line to account for existing water use and another line that shows the total of both existing demand and anticipated demand for the entire development program. 2

3. Water and Sewer Connection Fees—In accordance with the May 12, 1997 Water System Connections/Construction Agreement between the City and the University for water service to the Marine Sciences Campus, water and sewer connection fees for existing development are outstanding and overdue. Any future development will require the payment of additional water and sewer connection fees, as well as plan review and inspection fees. 3

4. Significant Unavoidable Water Supply Impact—The report concludes that the cumulative impact of the CLRDP, in conjunction with other development in the service area, on water supply would be significant and unavoidable. We agree with this characterization. Under critical or extended drought conditions, the City has inadequate water resources available to serve the needs of its existing customers. A project of this magnitude, along with other background growth, will incrementally compound this problem by increasing average daily water demands throughout the system and making any future shortages increasingly more severe than it would otherwise be without the project. 4

5. Desalination Plant—Page 4-4 mentions the possibility of the UCSC Marine Sciences Campus as one potential area the City is considering for the siting of a proposed desalination plant. The entire facility is estimated to require approximately 3 acres, depending on the layout of the components within the facility. There are several alternative locations under consideration where a desalination plant, if approved, could be located. These areas are all located on the lower west side of the City and were selected based on proximity to intake and brine disposal facilities, distribution system infrastructure, power supply, adequate space requirements, and consistency with surrounding land uses. The desalination plant footprint would be sized to fit the selected parcel. Recognizing that a formal decision to proceed with such a project must 5

Mr. John Barnes
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 Page 3

await the completion of an Environmental Impact Report, which is scheduled to be completed at the end of 2004, our desire is to leave open the option of siting a desalination facility on the University Marine Sciences Campus property for future consideration, should the City Council adopt desalination as part of the City's preferred water supply plan.

5

6. Traffic Impacts—Fair-share contributions to traffic impacts are proposed only for Bay/Mission, Chestnut/Mission, and sidewalks on Delaware Avenue. The proposed improvements to Bay/Mission and Chestnut/Mission may be inadequate or infeasible. The University should consider fair-share contributions to SR 1/SR 9, Bay/Escalona, Empire/Heller, Western/High, Shaffer Road/Mission, and Shaffer Road Railroad Crossing. The "fair share" is defined in the DEIR as agreeing to negotiate for a contribution to the intersection improvement based on Government Code Sections 5499 et seq. The University's contribution is contingent on the City establishing a mechanism to collect funds from other developments (Page 4.15-33). The City is in the process of developing a Traffic Impact Fee (TIF) for the far west side, for which this area is a part. Fair share should be defined as paying the TIF based on trips generated.

6

7. Shaffer Road—The proposed plan does not accommodate for the completion of the remaining portion of Shaffer Road, a portion of which lies within an easement on the University property. The City continues to stress the importance of completing this road to accommodate two lanes of travel, a class II bike path, sidewalks, appropriate parking, and the railroad crossing. The University should develop a plan line for Shaffer Road, from the railroad tracks to Delaware Avenue in coordination with the City. The right-of-way for Shaffer Road should be dedicated to the City. The University portion of Shaffer Road should be constructed to City standards.

7

8. Roadway Width, Design, and Access—The DEIR does not adequately address secondary access to the site and improvements to the Shaffer Road railroad crossing. The internal roads (assumed to be private) are only 22 feet wide with no curb and gutter. Lack of secondary access compounds the emergency access and neighborhood impacts issues. A 22-foot wide road appears inadequate for this amount and intensity of development. At a minimum, the road edge will deteriorate and the road will narrow even more. The attached memorandum from Fire Chief Ron Prince of the City of Santa Cruz Fire Department expands on the safety and emergency response impacts associated with the narrow roadways and the lack of secondary access.

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9. Site Access—The design and improvements to the intersection of Shaffer Road and Delaware Avenue will require City approval. The design should emphasize primary access to the Marine Sciences Campus via Shaffer Road, rather than Delaware Avenue. It is the City's goal to direct traffic to Mission Street from this development via Shaffer Road. Consideration should be given to design the intersection of Shaffer Road and Delaware Avenue to accommodate the traffic routing to Mission Street as the major traffic movement. Construction of these improvements should be coordinated with the City and built under an encroachment permit from the City.

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Mr. John Barnes
 March 19, 2004
 Page 4

10. Construction-Related Impacts and Street Condition—The impact of construction-related traffic, parking, and staging needs to be considered. The University should assist with its fair share of costs for maintenance and construction traffic-related impacts to nearby roadways. The EIR should develop a method to calculate and report on the nature of this impact and develop a pro-rata share of the repair costs as mitigation.

10

11. Sanitary Sewer Impacts—On Page V-36 of the CLRDP, the paragraph describing the sanitary sewer system seems to be in contradiction. It states that capacity is not sufficient and then in the next sentence states that there is available capacity. Please clarify the fact that the pump station on Delaware Avenue must be upgraded; it does not have the capacity to handle additional flow.

On Page 4.16-14, the DEIR states that the City pump station will not be adversely impacted by this project. The DEIR bases this on the existing dry weather flow and the estimated dry-weather flow from the proposed project. The capacity of wastewater pump stations and pipelines are based on peak wet-weather flow, not average dry-weather flow (or peak dry-weather flow either). The City pump station will need to be upgraded to handle the additional flow from this project. The capacity of the station will need to be increased by replacing the two (2) existing pumps with larger pumps and possibly by adding one (1) additional pump. This work should be completed before any of the “near-term” projects are complete. During that upgrade a protective coating should be applied to the wet well in order to prevent a future shutdown to do that type of work. A shutdown like that will be much more difficult once the near-term development is complete and the utilization of the pump station is more than doubled. As mitigation for the project the University should pay for its fair share of any necessary improvements.

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The force main from the pump station to the beginning of the gravity pipeline system has adequate capacity, but the downstream gravity pipelines will need to be analyzed once the overall cumulative impacts can be determined from various potential projects in the area. These pipelines were near capacity, but since Texas Instruments closed the pipeline should have sufficient capacity. Still, it must be analyzed, and as mitigation the University should pay for its fair share of any necessary project improvements.

12. Refuse/Recycling—It is unclear if the City will be asked to provide refuse and recycling services to this site. Currently, the City provides cardboard recycling. If the City will provide service, then roofed enclosures must be built with sewer connections to facilitate cleaning. Adequate access through parking lots and streets to enclosures must be provided. The design of these facilities should meet City standards.

12

13. Fire Safety and Response—The City of Santa Cruz Fire Department would provide emergency response to the project site. There are significant concerns with the project design and access which should be addressed in the analysis. A memo from the Fire Chief dated March 15, 2004 describing these items is attached.

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Mr. John Barnes
March 19, 2004
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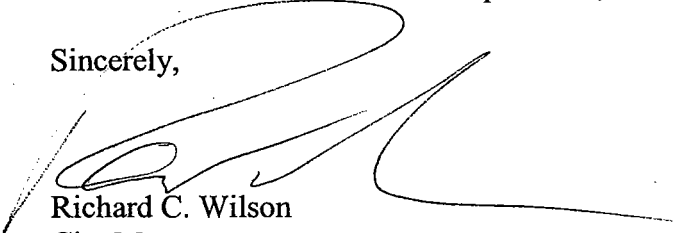
14. Wildlife Corridor—The wildlife corridor at the northerly boundary of the site does not appear of sufficient width to functionally serve its purpose of allowing animals a continued connection to the Swenson Property and the Moore Creek/Antonelli Pond area.

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The City wishes to continue to participate in the planning process for the Marine Sciences Campus. The comments provided herein focus on the DEIR, not the complete draft CLRDP. Please let us know the process and timeline the University intends for the next stages of consideration of this plan.

Thank you for your consideration of these comments. Staff of the various City departments is available to provide additional background or clarifications of any of the items brought up in this letter. Please send copies of the response document to me, as well as to Fire Chief Ron Prince, Juliana Rebagliati of the Planning and Community Development Department, Christophe Schneiter of the Public Works Department, and Toby Goddard of the Water Department.

Sincerely,



Richard C. Wilson
City Manager

Attachment: Memo from Ron Prince, Fire Chief, dated March 15, 2004

cc: Gene Arner, Planning and Community Development Department Director
Mark Dettle, Public Works Department Director
Bill Kocher, Water Department Director
Ron Prince, Fire Chief



MEMORANDUM

SANTA CRUZ FIRE DEPARTMENT
 230 Walnut Avenue, Santa Cruz, CA 95060 • Phone (831) 420-5280 • Fax (831) 420-5281

DATE: March 15, 2004
 TO: Juliana Rebagliatti, Principle Planner
 FROM: Ron Prince, Fire Chief *RP*
 SUBJECT: REVIEW OF THE UCSC MARINE SCIENCE CAMPUS PLAN

This memorandum is in response to your request for preliminary fire department comments on the proposed UCSC Marine Science Campus. This review was based on the Marine Science Campus Long-range Coastal Development Plan dated January 2004, and the associated draft environmental impact report. It will not be possible to identify all the fire and life safety issues regarding this project without a complete set of civil engineering and architectural drawings.

The following access issues were noted during our review: 1) Design elements in the plan call for reducing the width of streets and parking lots to minimize pavement and to help reduce speeding. Since all traffic would share the same single access road for bicycles, pedestrians and vehicles, delays in emergency responses may be encountered; 2) Another design element calls for landscape strips along roads and parking lots. In these "planting strips" would be large trees. (*"Major tree planting should be located every 28 feet to allow for two parking spaces between trees"*.) On page VI-10 of the design guide, illustration 6.6 shows a streetscape with major trees that would hamper aerial truck operations, and might prevent a timely emergency response. Unless there is sufficient vertical clearance, access to buildings will be affected; 3) Parking lot design is critical in ensuring engine and ladder truck access to new and existing fire protection systems; some of the radius and parking lot design elements appear to limit access; 4) A second access and grade crossing at the railroad tracks across Shaffer Road is necessary to ensure adequate response options. The following Santa Cruz Municipal Code language should guide the minimum acceptable road standards for this project:

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The minimum unobstructed width of all roadways shall be 20 feet, with a height clearance of 13 feet 6 inches. Vehicle parking shall add to the minimum road width, so as not to obstruct the two 10-foot traffic lanes. This is usually increased by eight-foot increments when using parallel parking, so that a road is 36 feet wide to accommodate parallel parking on both sides. An all-weather road surface shall consist of a minimum of six inches of compacted Class II base rock for grades up to and including five percent, and oil and screened for grades up to and including 15 percent, and asphaltic or concrete pavement for grades exceeding 15 percent, and with a non-skid finish for grades up to 20 percent.

18

The imposed loads of apparatus are a minimum of 40,000 pounds for a fire engine and 60,000 pounds for an aerial ladder fire truck. The minimum inside turning radius shall be 28 feet and minimum outside turning radius shall be 48 feet. If the width of an approved fire apparatus access is less than 20 feet, the minimum radius shall be made to act as curve widening. The means for turning around the apparatus are created by using a 20-foot wide roadway, the minimum turning radius and a 70-foot long roadway dimension. The bulb or cul-de-sac design should be 96-feet in diameter, if street parking is allowed.

18

5) As the State is bound by the same codes as the City in regards to fireflow, the minimum standards allowed will be adequate. The existing 10" water connection to the proposed project is located at Delaware and Shaffer Road. It currently provides both fire and domestic water to Long Marine Lab at 100 Shaffer Road, Dept. of Fish and Game Wildlife Station at 1451 Shaffer Road, and NOAA/NMFS at 110 Shaffer Road. It is proposed to install a second water connection at the Schaffer Road grade crossing. A looped system is preferable to the existing system; 6) A design element that calls for building setbacks to be 15 to 30-feet along buildings may warrant the relocation of existing fire department connections and hydrants, in order to ensure adequate and timely access.

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The aforementioned observations assume that all new construction will be fully protected with automatic sprinklers, including electronic supervision of the flow valves. With respect to supervision of any alarm signals, as well as the receipt of 9-1-1 calls from the site, all fire and medical emergency communications should be routed via approved means to the City's consolidated communications center (currently, this is not the case with existing conditions).

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If you have any questions regarding these preliminary comments, please contact me at x5280.

COMMENT LETTER LA-2: RICHARD C. WILSON, CITY OF SANTA CRUZ

LA-2-1: The cumulative analysis in the Draft EIR accounts for the increase in enrollment on the UCSC main campus beyond the 1988 LRDP enrollment level of 15,000 students FTE. At the time that the analysis for the CLRDP EIR was conducted, UC Santa Cruz had not commenced the update of its 1988 LRDP and had not developed any firm estimates of how much the campus enrollment would increase once the 15,000 FTE enrollment level is attained in 2005. However, given the planning horizon of the CLRDP (2004 through 2020), the campus recognized the need to factor in additional main campus growth in order to accurately analyze the cumulative impacts of the CLRDP. As stated on page 4-7, in the third bullet, the CLRDP EIR analysis assumed that the enrollment on the main campus would increase to 19,000 FTE by 2020. The projected 2020-2021 enrollment of 19,000 students was based on the historic average annual enrollment increase of approximately 300 students per year, which was the best information available at the time of the analysis (Draft EIR page 4.12-7). Population and traffic associated with this increase in enrollment was taken into account in the analysis presented in the CLRDP EIR.

As explained on Draft EIR page 4.15-48, 2010 background traffic volumes were estimated by taking existing traffic volumes, adding in traffic from approved but not built projects, and adding in additional traffic based on an annual growth rate of 1.2 percent. That annual growth rate was derived from the AMBAG travel model. Note that the AMBAG travel model assumes that the main campus enrollment would continue to grow beyond 2005 to 17,000 FTE by 2020 (a number higher than the 15,000 FTE used in the 1988 LRDP) and therefore it does take into account some additional main campus growth between 2005 and 2010. The growth rate based on the AMBAG model was not adjusted any further for the period 2005 to 2010 because for this period, the campus expects that students in excess of 15,000 FTE would be accommodated off campus and in expanded summer programs (see footnote 8 on page 4.15-48).

With respect to 2020 background conditions, as explained on page 4.15-59, the EIR analysis did not rely just on AMBAG projections (because the AMBAG projections assumed only 17,000 FTE by 2020) but incrementally added to the growth-factored traffic volumes the additional trips that would result from an enrollment level of 19,000 FTE.

The update of the main campus LRDP was launched in the fall of 2003. The LRDP update is a multi-phase, three-year process that began with the appointment of two planning committees and the selection of a planning consultant. One committee, called the Strategic Futures Committee (SFC), composed primarily of faculty, was charged with articulating UCSC's programmatic vision for the next 15 years and with recommending an enrollment target for further evaluation. The second committee, the LRDP Committee, made up of on and off-campus members, has focused on defining a physical plan to handle the growth in enrollment between 2005 and 2020. In June 2004, SFC issued a final report with a preliminary recommended target of 21,000 FTE by 2020. Since then, the LRDP Committee and its consultant have been scenario-testing that target, and its on and off-campus implications, especially with respect to the capacity of the campus and neighboring community to handle this growth. The enrollment level of 21,000 FTE is not a firm

or final number and will not necessarily be adopted by the Regents. It is too early in the planning process to assume any particular outcome regarding enrollment projections. For the present, continued reliance on the 19,000 FTE target for 2020, based on historic average annual increases, is considered appropriate. Should the new enrollment number be higher than 19,000 FTE, the campus will reexamine the analysis in the CLRDP EIR at an appropriate time to determine whether there are additional impacts. Please note that the CLRDP EIR is a program EIR to guide the long-term development of the Marine Science Campus. There will be additional opportunities to update the analysis in the EIR as individual development projects under the CLRDP are proposed. CEQA requires that at the time that a project-level evaluation is tiered from a program EIR (such as the CLRDP EIR), if there are any changes in the circumstances in which the specific project is being undertaken, the lead agency must conduct additional analysis of impacts. The campus will do that if warranted when specific projects under the CLRDP are proposed.

Please note that the list of projects that was provided by the City for use in the Draft EIR did not include the Home Depot or the Lowe's store. No application for the Home Depot project had been made to the City at the time of publication of the Notice of Preparation or even the CLRDP Draft EIR, in January 2004. Under provisions of the CEQA *Guidelines* (Sections 15355, 15134(b)), the Home Depot project was not a "future probable project" and therefore not appropriate for inclusion in the cumulative impact analysis. It should also be noted that the list of projects provided by the City was used to evaluate cumulative impacts on only a couple of resources (the impact of cumulative discharge of urban runoff to Moore Creek drainage from the Marine Science Campus, the Pacific Shores project and the future residential development of the Swenson parcel as discussed on page 4.8-39; and the potential cumulative construction noise impact as a result of concurrent construction on the campus site and on the Swenson property as discussed on page 4.11-28).

For all of the key resource areas such as traffic, the Draft EIR uses a projections approach for cumulative impact analyses and not a list-based approach. As explained on pages 4.15-48 and 4.15-59, the background traffic volumes were estimated using regional growth forecasts from the AMBAG travel demand model. To forecast future 2010 traffic volumes, peak-hour traffic generated by developments that had been approved by the City at that time were added to existing AM and PM peak hour volumes, and then an annual growth factor of 1.2 percent (representing non-project-specific growth) was applied to those existing plus approved volumes. The annual growth factor was established by reviewing forecasts from the AMBAG travel demand model and the City Traffic Engineer was also consulted in developing this growth factor. The 2020 background traffic volumes were developed using the same method. The growth factor was applied to consider traffic from future developments such as Home Depot that were not specifically identified when the traffic analysis was conducted. If both a list of projects and growth projections are used in combination to forecast future traffic volumes, the resulting numbers could be excessively high as some of the growth may be double-counted. Note that the Lowe's store project has been abandoned, and as of August 2004, there are indications that the Home Depot store may be located in another community, and not in the Santa Cruz Westside area.

LA-2-2: The comment is acknowledged. Table 4.16-3 on page 4.16-10 of the Draft EIR has been revised as follows:

**TABLE 4.16-3
ANTICIPATED WATER DEMAND AND WASTEWATER GENERATION
ENTIRE DEVELOPMENT PROGRAM**

Building Element	Size (sf)	Unit	Rate gpd^a	Future Water Demand (gpd)	Future Wastewater generation (gpd)^b
USGS Phase I	78,500	sf	0.1	7,850	7,065
USGS Phase II	50,000	sf	0.1	5,000	4,500
Other Marine Research Buildings	43,000	sf	0.1	4,300	3,870
NMFS Phase II	30,000	sf	0.1	3,000	2,700
Greenhouses (to be removed)	-26,844	sf	N/A	-987	-888
Future UCSC Buildings	25,000	sf	0.1	2,500	2,250
Center for Ocean Health Phase II	18,000	sf	0.1	1,800	1,620
SORACC	6,000	sf	0.1	600	540
350-Seat Seminar Auditorium	5,000	seat	5.0	1,750	1,575
Meeting Rooms	2,500	sf	0.1	250	225
Dining	3,500	100 meals	50.0	5,000	4,500
Office Trailers (to be removed)	-3,000	sf	0.1	-600	-540
80 Units Housing	82,000	sf	0.2	16,400	14,760
30 Dormitory Rooms	12,000	60 beds	60	3,600	3,240
10 Visitor/Overnight Accommodations	2,500	20 beds	130.0	2,600	2,340
Caretaker Replacement Housing	1,600	bed	100.0	1,600	1,440
Caretaker Housing (to be removed)	-1,400	bed	100.0	-1,400	-1,260
Centralized Warehouse	37,500	employee	110.0	990	891
Subtotal				54,253	48,828
<u>Existing water use (from Table 4.16-1)</u>				<u>17,958</u>	
<u>Total</u>				<u>72,211</u>	

^a Rates for Marine Research and Education facilities are based on the average consumption at existing LML buildings, which generally equate to about 0.1 gpd per sf of building area.

^b Future wastewater generation is derived by multiplying the estimated water demand by 90 percent.

SOURCES: BMS Design Group, ESA, Mesiti-Miller Engineering, UCSC Office of Planning and Construction, 2003

LA-2-3: It appears that the commenter is referring to a disagreement between the City and the University regarding whether, under the 1997 agreement referred to in the comment, an additional fee was due upon completion of the LML Ocean Health building and the Predatory Bird Research Group Seabird/Raptor facility addition. This is not a CEQA issue and the University will respond to the City on this issue under separate cover. Also see the response to comment SA-3-71.

LA-2-4: The comment is noted.

LA-2-5: The City's comment regarding its desire to leave open the option of siting a desalination facility on the project site is acknowledged. As indicated in the Draft EIR at page 4-4, the City has prepared an Integrated Water Plan (IWP) that examines alternative ways, including a desalination plant, to secure additional potable water for its service area. Environmental review of the plan is underway at this time and a specific water supply option has not been selected. If the desalination option is selected, the plant would be constructed in one of several areas under consideration by the City in the Santa Cruz westside area. The Draft EIR for the City's IWP remains in preparation in summer 2004. Because the City of Santa Cruz is the lead agency for the IWP EIR, it has discretion to continue to consider the option of siting a desalination facility at the project site.

LA-2-6: As noted on page 4.15-73 of the Draft EIR, the proposed project will result in traffic impacts at six intersections where the project's impact is identified as cumulatively considerable. UCSC would contribute its fair share to improvements at three of the locations listed by the commenter: SR 1/SR 9 (River Street), Empire/Heller, and Western/High. No significant impacts were identified for the three remaining intersections (Bay/Escalona, Shaffer/Mission, and Shaffer/Railroad crossing), and as such, no improvements or contributions are proposed. In the case of the Shaffer Road locations, the intersection and roadway segments in that area are expected to operate at LOS C or better during both peak hours under cumulative conditions through 2020, and no additional roadway capacity improvements would be needed.

As defined on page 4.15-33 of the Draft EIR, "fair share" is defined to mean that the University will negotiate for a contribution to the intersection improvement pursuant to procedures similar to those described in Government Code Section 54999 et seq. for contributions to utilities. The University will pay its fair share only if the applicable jurisdiction has established and implemented a mechanism for collecting funds from any other developers and entities contributing to traffic impacts, such as the City's proposed Traffic Impact Fee. See also response to comment SA-1-6.

LA-2-7: The CLRDP (Implementation Measure 5.1.3, page V-23) states that the University will cooperate with the City of Santa Cruz to evaluate the extension of Shaffer Road to State Route 1, and that Shaffer Road adjacent to the campus would be widened consistent with the City of Santa Cruz General Plan and public improvement standards. The Draft EIR analyzed the need for the extension of Shaffer Road and concluded that the improvement is not needed to improve circulation in the immediate area (page 4.15-70). Regarding the widening of Shaffer Road, please see the response to comment SA-3-86.

LA-2-8: The only proposed vehicular access point to the Marine Science Campus is the main driveway opposite Delaware Avenue at the Shaffer Road intersection. However, primary circulation is provided by the main campus street, while secondary access is provided by the controlled service access roadway (i.e., old McAllister Way). This roadway will generally serve as a bicycle/pedestrian trail. The total daily volume on the main campus street with full development of the CLRDP is approximately 4,100 vehicles per day. This volume is equivalent to the volume of a residential collector street and can be easily accommodated by a two-lane, 22-foot roadway. The narrow width is designed to maintain low travel speeds, and appropriate shoulders will be provided to maintain 22 feet of pavement. As noted on Draft EIR page 4.15-46, the main campus roadway will be constructed without curbs, which will allow emergency and public vehicles to bypass obstructions in the roadway. A wider road would further increase impervious surfaces, which would result in increased stormwater runoff. A key element of the Stormwater Concept Plan is to maintain pre-development peak flows to avoid potential impacts to natural resource areas (see page V-31 of the CLRDP).

LA-2-9: The design of the entrance to the Marine Science Campus will be developed in consultation with City staff. However, the extension of Shaffer Road is not proposed as part of this project and is not required as mitigation for any traffic impacts. Also see the response to comment LA-2-7. As such, all project-generated traffic will approach and depart the site using Delaware Avenue until Shaffer Road is extended over the railroad right-of-way.

LA-2-10: All construction-related activities will occur on-site and no off-site staging is proposed. Construction impacts, if any, would relate to trucks delivering construction materials. Deliveries can be coordinated to occur outside the typical peak periods to minimize congestion. However, construction impacts of this type are temporary and do not typically involve any permanent roadway improvements, which would negate the need for any fair-share contributions. UCSC will be responsible for any traffic control personnel to facilitate construction activities and will coordinate with City staff. The impacts on road pavement as a result of construction traffic is not an environmental impact under of the standards of significance used in the EIR (or in Appendix G of the CEQA *Guidelines*). Therefore, payment for the increased cost of road maintenance by the University is not included as a mitigation measure.

LA-2-11: According to the Santa Cruz Public Works Department, the single pump, at 180 gpm appears to be insufficient during peak wet weather flows (PWWF) under existing conditions. Should the City elect to replace existing pump(s) with larger pump(s), pump replacement could be timed to occur during the dry season and staged to allow at least one pump to remain operational. Because the pump replacement would occur at the site of the existing pumps, environmental effects would be expected to be minimal. Therefore, mitigation is not required. Should further evaluation of the improvement by the City indicate that it may result in significant environmental impacts, the University will contribute its fair share of the cost of mitigating those impacts. The University will also negotiate, as required with Government Code 54999, for any relevant fair share contribution.

LA-2-12: UCSC will coordinate with the City of Santa Cruz to ensure that recycling areas and associated facilities are consistent with City standards regarding access and sanitation.

LA-2-13: The comment is noted. Concerns related to emergency access are addressed in responses to comments LA-2-15 through LA-2-22.

LA-2-14: Commenter does not indicate specific width that is insufficient. The corridor is described as 20 feet with an 80-foot buffer. Although a 20-foot corridor would be insufficient for medium and large mammal species, but as indicated in the EIR the corridor is effectively 100 feet wide with the buffer and 150 feet if the railroad corridor is also included. The corridor and buffer will be revegetated with native shrubs and some trees to provide screening and isolation from human activities to the south. In addition, the effective corridor increases dramatically on the westerly portion of the site with the addition of wetlands W2, W6 and their adjacent buffers. These wetlands connect the wildlife corridor with Younger Lagoon. Please see also responses to comments SA-3-12 and I-5-14.

LA-2-15: Delays to emergency response vehicles are not expected to be caused by the proposed main campus roadway width and the presence of vehicles, bicyclists and pedestrians. As noted on page 4.15-46 of the Draft EIR, the main campus roadway will be constructed without curbs, which will allow emergency and public vehicles to bypass obstructions in the roadway. A series of public paths as shown on Figure 5.5 of the Draft EIR (Coastal Access and Recreation Diagram) would be used by pedestrians and could be used by bicyclists in an emergency situation (see also response to comment LA-2-8).

LA-2-16: As noted on the Draft EIR page 4.13-1, UCSC has adopted a Fire Protection Policy (UCSC Policy EHS0020, 1997), which ensures reasonable and consistent protection for persons and property in, on, and exposed to UCSC-administered properties in conformance with California statutes, regulations, and University policy. As such, UCSC would coordinate with Santa Cruz Fire Department to ensure that proposed trees and other site landscaping do not result in insufficient vertical clearance and access to onsite buildings.

LA-2-17: Figure 3-8 (Circulation and Parking Diagram) is not a detailed design drawing. All of the parking lots will include adequate aisle widths and turning radii to accommodate emergency response vehicles that would access the site. At the time the plan is implemented, UCSC will provide detailed design drawings to the Santa Cruz Fire Department for review.

LA-2-18: All of the study intersections in the immediate vicinity of the project site (Intersections 1 through 10 in the Draft EIR) are projected to operate at LOS D or better through 2020 cumulative conditions with full development of the project. As such, the need for a second access path between the fire station and the project site was not identified in the Draft EIR transportation analysis. The main campus roadway will be constructed to City standards to provide a minimum of 22 feet of pavement for two-way travel. Pavement width will be increased by a minimum of 7 feet if parking is to be provided on one side of the roadway and by a minimum of 14 feet if parking is to be provided on both sides of the roadway. The University will coordinate with the Santa Cruz Fire Department during the design process to ensure that roadways are constructed to provide for adequate emergency access and that adjacent landscaping does not hinder access.

LA-2-19: The comment is acknowledged.

LA-2-20: Should the CLRDP's proposed building setbacks (CLRDP Design Guideline 6.2.3, "Setbacks from Streets and Parking Lots) warrant relocation of existing fire hydrants, the University will coordinate with the Santa Cruz Fire Department with respect to hydrant siting and timing to ensure that all new and existing fire protection equipment and hydrants are accessible at all times.

LA-2-21: As described in the response to comment LA-2-16, the University will ensure that its buildings on the Marine Science Campus conform to California statutes and regulations and University policy, including installation and supervision of fire sprinklers and alarm systems. Pursuant to Title 19 CCR, Section 1.03, buildings controlled by other State agencies will also be subject to the requirements of the campus fire marshal. However, buildings controlled by the federal government are not required to meet state codes or regulations.

LA-2-22: All fire and emergency communications will be routed via the campus dispatch center to the Santa Cruz Consolidated Emergency Communications Center, as currently configured.



SANTA CRUZ COUNTY REGIONAL TRANSPORTATION COMMISSION

1523 PACIFIC AVENUE, SANTA CRUZ, CALIFORNIA 95060-3911 • 831/ 460-3200 • FAX 831/ 460-3215

March 18, 2004

UCSC

MAR 22 2004

Campus & Community Planning

John Barnes
 Environmental Assessment Group
 University of California
 515 Swift Street
 Santa Cruz, CA 95060

SERVICE AUTHORITY
 FOR FREEWAY
 EMERGENCIES
 (SAFE)

RAIL/TRAIL
 AUTHORITY

RE: Draft Environmental Impact Report (DEIR) for the UCSC Marine Science
 Campus Coastal Long Range Development Plan (CLRDP)

Dear Mr. Barnes:

COMMUTE
 SOLUTIONS

Thank for the opportunity to comment on the Draft Environmental Impact Report (DEIR) for the UCSC Marine Science Campus Coastal Long Range Development Plan (CLRDP). The Santa Cruz County Regional Transportation Commission (SCCRTC) serves as the Regional Transportation Planning Agency (RTPA) for Santa Cruz County. Staff would like to offer the following comments for your consideration:

TRANSPORTATION
 POLICY WORKSHOP

1. Staff supports the proposal to construct support housing for residential and visitor accommodations to serve the Marine Science Campus. Providing housing with the other development at the project location would support policies in the *2001 Regional Transportation Plan (RTP)* to reduce auto-dependent development by increasing urban density and encouraging infill projects in urban areas (RTP 3.2)

1

BUDGET &
 ADMINISTRATION
 PERSONNEL
 COMMITTEE

2. Staff agrees that the University should contribute its "fair share" to the City of Santa Cruz for the Mission Street (Route 1)/Chestnut Street. However, a feasible improvement for this intersection has not yet been agreed upon. Staff recommends that prior to the implementation of any mitigation measures at this location, the University, City of Santa Cruz, Caltrans and the Regional Transportation Commission analyze the options and agree upon the proposed improvement project.

2

INTERAGENCY
 TECHNICAL
 ADVISORY
 COMMITTEE

BICYCLE COMMITTEE

3. It would be helpful if the University could identify a potential rail platform location on the property for possible future expansion of passenger rail service as identified in the Major Transportation Investment Study (MTIS). Please refer to the Preliminary Project Report – Passenger Platforms and Related Improvements for the Santa Cruz Branch Line for Recreational Rail Service (<http://www.sccrtc.org/packet/2003/0309/w0309-05a.pdf>) for platform and station information.

3

ELDERLY & DISABLED
 TRANSPORTATION
 ADVISORY COMMITTEE

WWW.SCCRTC.ORG
 EMAIL:INFO@SCCRTC.ORG

4. Staff supports the goal of at least 30 percent of all person-trips to the Marine Science Campus made using alternatives to the single-occupant automobile. Please work with staff of our Commute Solutions Program towards this goal. This is consistent with RTP goals and policies 2.3, 2.7 and 2.5.

4

Thank you very much for your consideration of these comments.

Sincerely,



Linda Wilshusen
Executive Director

cc: SCCRTC, District 5 Development Review Branch, Nick Papadakis AMBAG
\\RTCSERV1\INTERNAL\ENVIREVULETTERS\UCSC MARINE DEIR.DOC

COMMENT LETTER LA-3: LINDA WILSHUSEN, SANTA CRUZ
COUNTY REGIONAL TRANSPORTATION
COMMISSION

LA-3-1: Comment noted. No response is necessary.

LA-3-2: As implied by the definition of “fair share” presented on page 4.15-33 of the Draft EIR, the mitigation measures relating to impacts at the Mission/Chestnut intersection would not be implemented until the agencies involved (the City of Santa Cruz, Caltrans, and the Regional Transportation Commission) have agreed on the proposed improvement. See also response to comment SA-1-6.

LA-3-3: UCSC supports the development of non-automobile modes and will consider a potential rail platform location at a later time. However, it should be noted that the current CLRDP Land Use Diagram (Figure 3-6) shows a 20-foot wildlife corridor with an 80-foot buffer adjacent to the railroad right-of-way that could preclude development of a platform.

LA-3-4: UCSC will continue to encourage campus commuters to use Commute Solutions for ride-share matching, and will work with the program in other ways as appropriate and feasible.

California Native Plant Society

Santa Cruz County Chapter P.O. Box 1622 Santa Cruz, CA 95061

March 15, 2004

UCSC

MAR 19 2004

Environmental Assessment Group
 University of California
 515 Swift Street
 Santa Cruz, CA 95060

Campus & Community Planning

Re: Comments on UCSC Marine Science Campus CLRDP Draft EIR

On behalf of the membership of the Santa Cruz County Chapter of the California Native Plant Society (SCCNPS) the following comments are submitted.

CNPS appreciates the attention to local genetic integrity of plant material proposed to be used on site with regard to landscape design, as noted in the Project Description section (p. 3-33). Besides creating/introducing vegetation patterns on site the University has an obligation to the public to care for the habitats already present, even where conditions have been degraded. It is understood that the University has plans for habitat restoration of the native coastal terrace prairie, coastal scrub, and wetland habitats in the proposed development areas. CNPS recognizes that replanting and restoring native plant habitats is largely unsuccessful. More specific details of the University's plans for these actions, in particular with the rare habitats are requested. In addition, what monitoring and maintenance will take place, and for how long?

1

Environmental Science Associates contracted by the University of California, Santa Cruz (the University) to compile the Draft EIR notes that the "No Project Alternative" would be the environmentally superior alternative (p. 2-4). Due to CEQA Guidelines Section 15126(d)(2) requiring that the EIR identify alternatives as superior, the "Reduced Program Alternative" is allowed under process to be the environmentally superior proposal. SCCNPS requests information from the University as to how it would specifically mitigate for the environmental impacts the "Reduced Program Alternative" would create?

2

Where specifically (projects with similar conditions) can the public turn to for examination of similar, working mitigation measures such as those proposed for impacts to wetlands (replanting, etc - p. 4.4-54, etc) and increased storm water (ponds, etc)? The DEIR refers to a "Resource Management Plan," which answers policy concerns of the California Coastal Commission in bringing this project into consistency with the Coastal Act; however, this plan is not presented to the public for review with the DEIR. Why did the University not include the Resource Management Plan (RMP) for public comment during this review period? Is the exclusion of this Plan for comment during this review period consistent with CEQA?

3

4

How would loss of potential nesting habitat for raptors- particularly the ground nesting Northern harrier be mitigated? The assessment of impact 4.4-2 (p. 2-22) is inappropriate to be labeled as "less than significant" due to the reality that to the west and east of the proposed development site, on the initial coastal terrace, nearly all of the grassland habitat has been converted to housing or farmland. In the region, what percentage of remaining, somewhat in tact and restorable 1st coastal terrace grassland/scrub matrix will the University irreversibly impact/destroy due to its project and project alternatives? The significance of the University's undeveloped grassland as inherently valuable and valuable as wildlife habitat is not well reflected in the Draft EIR.

5



Dedicated to the preservation of California native flora



California Native Plant Society

The Draft EIR also fails to adequately address the impacts to Younger Lagoon Reserve (YLR) both from the present and proposed University development, from the impacts of the 2.5 acre federal "in holding," and from the neighboring agricultural operation. Seeing as YLR in its entirety is an Environmentally Sensitive Habitat Area (ESHA) this inadequacy needs to be rectified. Perhaps this is addressed in the RMP? What additional measures will the University take to provide real protection to YLR? Some expected impacts are: hydrological alterations, erosion, pest plant and animal (due to proposed residents' pets) invasions, trespass impacts to fragile habitats, sound and light pollution, and impacts to wildlife movement to/from YLR. What scientific evidence does the University base its proposed wildlife corridor connecting to YLR as being functional for the diversity of wildlife known to occur on the site?

6

Lastly, with regards to the wetland delineation used in the Draft EIR the University chose to use previous wetland delineations only as "background information." When earlier delineations presented a larger footprint than that presented by the Huffman-Broadway Group how does the University justify this action? Section 4 (Environmental Setting, Impacts, and Mitigation Measures) notes (p. 4.9-22) that the University would "consolidate, expand and enhance wetlands." This sounds contradictory. Consolidation of wetlands suggests destruction of some. Coastal wetlands are ESHA's and loss of any is arguably not justifiable. Seeing as the University plans to do this through mitigation measures, how precisely does the University plan to "expand and enhance wetlands"? Information is requested on: what plant species will be used, how will hydrology be altered and what monitoring and maintenance regimes will be used?

7

CEQA requires that project proponents consult with permitting agencies during the development of project plans and present evidence of this consultation during the public review period. There is no clear evidence of consultation with a number of agencies for the permits required for this plan in the Draft EIR. Can the University provide specific evidence of consultation with all permitting agencies and measures that they have suggested necessary for permitting this project?

8

These comments are respectfully submitted. SCCNPS urges the University to reconsider some of this Draft EIR's environmental impact assessments and provide more detail and information to the public.

Sincerely,



Kimberly Hayes
SCCNPS Conservation Committee Co-chair



Dedicated to the preservation of California native flora



COMMENT LETTER ORG-1: KIMBERLY HAYES, CALIFORNIA NATIVE PLANT SOCIETY

ORG-1-1: The commenter is concerned that restoring native plant communities can be unsuccessful and requests more specific details. The Resources Management Plan (Appendix B to the CLRDP) contains enhancement measures, including a list of species, general planting protocols, and performance criteria.

ORG-1-2: The Reduced Program Alternative would represent an overall reduction in project size of approximately 42 percent. This alternative would mitigate significant project-level traffic impacts to less than significant levels. In addition, levels of other potentially significant impacts of the Reduced Program Alternative would also be reduced below project impact levels, or would remain the same as project impact levels, through implementation of mitigation measures identified in the Draft EIR and implementation measures identified in the CLRDP.

The Reduced Program Alternative would be environmentally superior to the proposed project because the Reduced Program Alternative would reduce the project-level traffic impacts of the proposed project to less than significant levels, would reduce the levels of most other impacts of the proposed project, and would not increase the levels of any impact of the proposed project.

ORG-1-3: The commenter requests information on successful wetland mitigation projects such as those proposed in the Draft EIR. No two restoration projects are exactly alike, but Santa Cruz residents may be familiar with San Lorenzo River Flood Control and Environmental Restoration Project, which utilizes some of the same techniques.

ORG-1-4: The Resource Management Plan is included in the CLRDP as Appendix B. The CLRDP was circulated for public review along with the Draft EIR during the public review period.

ORG-1-5: It is true that the northern harriers' intensive foraging of upland terrace and the lack of foraging areas on either side indicate that the upland terrace is an important foraging area for this species, but there is no reason to believe that raptor foraging will be completely eliminated from the site, only that the amount of foraging area will be reduced. The loss of harrier foraging habitat would be offset by CLRDP Policy 2.1, which restores native vegetation. Native grass and shrublands are considered more stable and diverse than the weedy plant communities they have been replaced by; for example, the small open areas between perennial grass hummocks allow more efficient foraging by aerial predators while simultaneously protecting nest sites with vegetation that retains its height structure longer into the summer. With implementation of this policy, there is a higher likelihood that the northern harrier, which requires sites "well-concealed by tall, dense vegetation, including living and residual grasses and forbs, or low shrubs" could establish nesting sites. The project thus provides a compensatory feature to prevent the reduction in foraging habitat from becoming a significant impact (see page 4.-64 of the Draft EIR and its supporting reference: Herkert, J. R., S. A. Simpson, R. L. Westemeier, T. L. Esker, and J. W. Walk, *Response of Northern Harriers and Short-eared Owls to Grassland Management in Illinois*. Journal of Wildlife Management 63:517-523, 1999).

ORG-1-6: Cumulative effects on Younger Lagoon from the CLRDP and other development in the area are discussed beginning at page 4.4-70 of the Draft EIR. Impacts occurring at present (current development, agricultural operations, etc.) are part of the existing environment at the site and are assumed to be present in the detailed discussion of the existing conditions beginning on page 4.4-12 of the Draft EIR.

The comment does not provide any support for its suppositions about impacts to YLR. Protections to Younger Lagoon are provided in many parts of the CLRDP, including Policies 3.5 and 3.6 and the associated implementation measures.

The CLRDP will actually introduce improved controls on human access and associated disturbance. See Implementation Measures 3.2.5 (trails and interpretive signage); 3.4.3 (noise intrusion); 6.1.4 (docent-led tours) and most clearly Policy 3.6 (controlled public access to YLR).

See also responses to comments I-5-18 (pets) and I-5-17 (noise and light). The commenter also questions the functioning of the wildlife corridor. The issue is addressed in responses to comments SA-3-12, and I-5-14.

ORG-1-7: The Huffman-Broadway Group (HBG), who conducted the wetland delineations for the project, did not rely on previous wetland delineations for the following reasons:

1. The 1993 and 1997 delineations were based on the U.S. Army Corps of Engineers (ACOE) wetland delineation methodology. ACOE verified the 1997 delineation, but the verification expired in 2002. Hence, a new ACOE delineation is required.
2. The 1993 and 1997 delineations were based on conditions observed on site at the times the delineations were prepared. HBG did not conduct field investigations in 1993 and 1997 so was unable to verify their accuracy. Findings from HBG's 2001-2003 field investigations do not support the 1993 and 1997 delineations.
3. The informal delineation conducted by the Terrace Point Action Network was based on the distribution of false willow (*Baccharis douglasii*), an obligate (OBL) wetland species. It was not consistent with California Coastal Commission (CCC) wetland delineation criteria because many areas dominated by *Baccharis douglasii* and therefore delineated as wetlands under the informal delineation conducted by the Terrace Point Action Network support upland hydrology conditions.

With respect to filling of wetlands, the Draft EIR acknowledges that the implementation of the CLRDP will result in the filling of one small 43 square foot non-ESHA wetland in the northeastern portion of the campus. Please see response to comment SA-3-1 which explains why this fill does not conflict with the provisions of the Coastal Act. Please refer to the Resource Management Plan (which is Appendix B in the CLRDP) which provides details about the manner in which on-site wetlands will be enhanced. The Resource Management Plan also provides information on types of plantings and the monitoring and maintenance activities associated with both the upland areas and the wetlands.

ORG-1-8: The commenter refers to the CEQA requirement that project proponents consult with permitting agencies during the development of project plans. For a planning document such as the CLRDP, other than approval by the Coastal Commission, there are no permits required in connection with adoption of the CLRDP. However, CEQA *Guidelines* (Section 15086) require consulting with responsible and trustee agencies, among others, during the preparation of the Draft EIR. This process, which includes requesting that agencies comment on the NOP and the Draft EIR, is described on page 1-4 of the Draft EIR. Consultation with the Coastal Commission is detailed on page I-2 of the CLRDP.



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Santa Cruz, CA 95060

UCSC

MAR 19 2004

Campus & Community Planning

March 19, 2004

Dear Dr. Eadie:

This letter is submitted by the Sierra Club to address comments and concerns with the Draft Environmental Impact Report ("DEIR") prepared for the Coastal Long Range Development Plan at Terrace Point ("CLRDP") for the University of California Marine Science Campus. Attached to this letter is a series of comments and questions on the DEIR and accompanying documents for the CLRDP. As you know, the Sierra Club has worked in partnership with a number of local entities for some time in an attempt to help balance the need for coastally dependent development with the many sensitive natural resources at Terrace Point. In an effort to maintain brevity of our comments here, we would like to state that we are in full agreement and support of the comments submitted by the Terrace Point Action Network and Barney Elders, both with whom we have worked closely through this process to formulate our comments and questions. In addition, we will not repeat here some of the questions our representative raised during the public hearing, but we look forward to answers to those questions.

We look forward to the University's responses to our many questions and request an opportunity to further respond before the University forwards the final Environmental Impact Report ("EIR") and CLRDP to the Regents of the University of California. The scope of this project and the potential impacts to natural resources and our community require this opportunity.

Thank You,

Marilyn Fravel
Sierra Club Chair

Cc: TPAN
Barney Elders
Santa Cruz City Council

"...to explore, enjoy and protect the wild places of the earth."

DEIR COMMENTS/QUESTIONS

A. On Coastal Dependence

The USGS and substantial portions of the other proposed development are not clearly coastal dependent developments. We understand quite clearly that the USGS facility, in particular, does not require a coastal location. Furthermore, a number of marine researchers who might be considered to be doing more coastally related work are not being offered facilities at Terrace Point, creating the need for further expansion of facilities at the University's property further inland.

Questions:

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|----|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---|
| 1. | Please define what percentage of the square footage of the current facilities at Terrace Point are coastal dependent? | 1 |
| 2. | To what other projects does the University compare this one, within the California coastal zone, with regard to the permissible ratio of coastal dependent vs. non-coastal dependent development? | 2 |
| 3. | What proportion of time and space do the current NMFS and DFG facilities contribute to the University's teaching and research mission? | 3 |
| 4. | What proportion of time and space will future non-University facilities contribute to the University's teaching and research mission? | 4 |
| 5. | For the prior 2 questions: how can the public verify the answers that are provided? | 5 |

B. On Hydrological Impacts to ESHA

A number of impacts to acknowledged Environmentally Sensitive Habitat Area ("ESHA") are not sufficiently addressed. We have requested, and at times the University has acknowledged the need for, the analysis of a hydrological model that incorporates both surface and ground water flows through the site. The presumption of the documents is that groundwater flow mimics surface water flow in its direction: this is unsubstantiated by data at this site. Prior research at this site by Dr. Robert Curry indicates that the surface topography does not relate well to the topography of the underlying bedrock. Furthermore, the University does not present information on the impacts to reducing groundwater storage as will inevitably occur following the typical compaction, etc., of development. Therefore, there are unmitigated impacts to groundwater which is integral in supplying the wetlands on the terrace as well as seeps on the bluffs and Younger Lagoon, and, perhaps, Younger Lagoon itself.

Questions:

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|----|----------------------------------------------------------------------------------------------------------------------------------------|---|
| 1. | What proportion of water is supplied via surface vs. subsurface flow to the ESHA's at the site? | 6 |
| 2. | Why did the University not proceed to use a model to analyze sub surface as well as surface water impacts of its proposed development? | 7 |

- 3. Why does the University assume that the surface and subsurface flows mimic one another in flow direction? | 8
- 4. How much water supplied by subsurface flow will be lost to wetlands and ESHA's because of compaction, utility line placement, etc., from development proposed by the CLRDP? | 9

C. On Geologic Faulting

Geologist Wayne Ferren has noted in his extensive surveys of the coast that natural freshwater ponds nearly exclusively occur along faults. There is evidence for that possibility at Terrace Point. Setbacks should occur from any such faults, but there is little detailed analysis of these faults at the site.

Questions:

- 1. How possible is it that the pond at Terrace Point occurs along a fault? | 10
- 2. If a fault occurs under the Terrace Point pond, what damage might result from building within the standard set back? | 11

D. On Toxic Soils/Dust

Toxicologists at UCSC have determined that large concentrations of DDT and its breakdown components occur on Terrace Point in wind borne dust from the agricultural fields to the west of the site. Other toxins might very well occur in dust carried from these fields on the frequently very strong winds that blow across the site.

Furthermore, soils have been extensively excavated during each recent development at Terrace Point. These soils contain toxic concentrations of DDT and its breakdown products, so much so that they cannot be moved from the site without a permit for disposing of toxic waste. In the past, these toxic soils have been dumped on the edge of Younger Lagoon and temporarily stabilized with vegetation. At times, this vegetation has not been maintained and significant erosion has delivered these toxic soils into the lagoon.

Questions:

- 1. Why does the University not present data from its own researchers on potential sources of human toxicity at Terrace Point, especially when it is proposing housing people there for the first time? | 12
- 2. How does the University propose to dispose of future toxic soils generated from development at the site? | 13
- 3. What is the yearly threshold of tolerance for toxic soils eroding into the ESHA's at the Terrace Point site? | 14

E. On Long Term Stewardship

The University proposes an extensive restoration and wetland management program at the site, but there is no clear funding mechanism. Such work requires secure funding and mitigation cannot be considered feasible without issuance of bonds or other similarly reliable resources. Moreover, the University proposes a zone precluding extension of utilities without providing the public with information on the mechanism for such mitigation.

Questions:

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|----|------------------------------------------------------------------------------------------------------------------------------------------------------|----|
| 1. | How does the University propose to provide for funding for the long term stewardship of ESHA's at Terrace Point and Younger Lagoon? | 15 |
| 2. | What insurance does the public have that proposed mitigations will be funded in the future? | 16 |
| 3. | What legal mechanism does the University propose to employ in setting aside a zone that precludes extension of utilities to properties further west? | 17 |

F. On ESHA for Raptors

The University reports that one other area, with plant and animal communities similar to Terrace Point, was declared ESHA because it supported sensitive raptor populations, such as at Terrace Point. We submit that the continuously very high vole populations at Terrace Point provide an unusually valuable resource for a number of sensitive raptors.

Questions:

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|----|------------------------------------------------------------------------------------------------------------------------------------------------------------------|----|
| 1. | How, precisely, does the acreage, landscape context, and habitat values of the Terrace Point site compare to the other site declared ESHA for sensitive raptors? | 18 |
| 2. | Where else in the region does a meadow regularly support the diversity and abundance of raptors similar to Terrace Point? | 19 |
| 3. | Where else in the region are vole populations as abundant as at Terrace Point? | 20 |

HUFFMAN-BROADWAY TERRACE POINT WETLANDS CRITIQUE

Page 4, section 2.1

A. Interpretation of the Coastal Commission wetlands definition is flawed

HBG:

Vegetation is not, alone, indicative of wetlands. Soils are incorrectly classified as wetlands soils and (because of their dark chroma) and have colors that mask the wetland/upland distinction. So, hydrology is the sole reliable indicator of wetlands at this site. Use saturated soil within the majority of the root zone as the major indicator of wetlands.

Sierra Club Critique:

A number of hydrophytes, not just *Baccharis douglasii*, exist where there are wetlands at the site. We agree that the soil chroma and classification require further analysis of the soils: it would be correct to test for redox potential. We agree that soil saturation is an important indicator, but that their quantitative analysis of “saturated” is wrong (more below).

Questions:

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|----|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----|
| 1. | Why did HBG not collect data on the redox potential of the soils, including tests to see if those data could be relied upon for the specific soil conditions at the site? | 21 |
| 2. | What quantitative test did HBG use with which to compare their qualitative test results, especially the “wet” classification? | 22 |

Page 6, top

B. Growing season in California’s coastal environment is more limited than is implied

HBG:

California growing season defined as “year-round”, making an 18 day saturation period (5% - Corps standard).

Sierra Club Critique:

Coastal California’s growing season is limited to Oct 15 – June 15, the period of soil saturation, creating a 8 month growing season, 5% of which is a 12 day saturation period.

Question:

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|----|-----------------------------------------------------------------------------------------------|----|
| 1. | What data do HBG use to classify the growing season as “year round” for this particular site? | 23 |
|----|-----------------------------------------------------------------------------------------------|----|

Page 8, bottom

C. On the credibility of the USFWS wetland plant indicator list

HBG:

Because many plants have properties that enable them to occur in a range of microhabitats (i.e., wetlands and non-wetlands), the presence of wetland indicator species cannot be used as unequivocal evidence of the presence of wetland hydrology and hydric soils.

Sierra Club Critique:

The use of the official wetland plant indicator list is standard practice with wetland delineations. The information collected for that list is rigorous and expert opinion, compiled throughout the range of the species.

Question:

1. On the whole, how frequently do wetland delineators rely upon the USFWS list, as it stands, to delineate wetlands?

24

Page 9, section 3.1

D. Description of the geology of the area is mistaken

HBG:

Overlying the Santa Cruz Mudstone are young coastal sediments laid down in a high-energy, near-shore marine environment. These deposits are dominated by medium- to coarse-grained, well-sorted sand, with basal gravel layers. They are permeable and have a relatively high groundwater transmission capacity.

Sierra Club Critique:

The soils on the first marine terrace are quite old, over 100,000 years. They are sandy loams with low permeability and relatively low groundwater transmission capacity.

Question:

1. Why does HBG characterize the soils at the site as “young” and “permeable?”

25

Page 9, section 3.1

E. Mistaken soil moisture characterization

HBG:

Coastal low clouds and fog are common, especially during the late night and early morning hours, which act as a supplemental water source for vegetation and keep soils moist through much of the year.

Sierra Club Critique:

Local researchers have collected data from local grasslands indicating that soils dry, despite summer fog and clouds, in summer to levels beyond the point where soil moisture is available for plant growth.

Question:

1. What data does HBG cite to illustrate the maintenance of “moist” soils throughout the year in these coastal settings?

26

Page 10, top

F. Soil series listed as “hydric” by the NRCS

HBG:

As described above, inclusion of a soil series on a local county hydric soils list is insufficient to document the existence of hydric soils. Hence, the inclusion on the local county hydric soils list of Watsonville Loam, thick surface, 0 – 2 percent slope, and Elkhorn Sandy Loam, 0 – 2 percent slope with Watsonville inclusions, should not be used as a basis for determining that Terrace Point and Younger Lagoon Reserve contain hydric soils. Each of the soil series onsite has the potential to support hydric soils irrespective of whether they appear on the local county hydric soils list.

Sierra Club Critique:

Because the soil series at the site have the potential to support hydric soils, they should have been tested for redox potential.

Question:

1. What data does HBG rely upon to refute the potential for the site’s soils to be hydric?

27

Page 10, section 3.3 “Historical Land Use and Vegetation”

F. No real analysis of the historic aerial photos

HBG:

Include information about the aerial photos indicating that the area was devoid of vegetation from the 1960’s to present.

Sierra Club Critique:

It was our understanding that HBG was analyzing the aerial photos to ascertain historic drainage patterns in helping to delineate current patterns of potential wetlands. There are aerial photos from the 1930’s forward for this geographic area. These indicate drainage patterns that would help to explain some of the areas of wetland vegetation that include *Baccharis douglasii*. HBG should include in their report examples of historic aerial photos to illustrate this type of historic drainage pattern analysis.

Questions:

1. Why didn’t HBG present its analysis of historic drainage/wetland patterns at the site from their research of historic photos?
2. What does that type of analysis suggest?
3. Why do no historic photos appear for the public in the environmental review documents?

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G. Page 11, section 4.1, bullet one

HBG:

Wetland indicator species may appear during or immediately after human activities that created conditions conducive to wetland development (e.g., soil compaction, human induced flooding or ponding). Following cessation of human disturbance, natural processes (e.g., weathering, aeration) may enhance soil drainage, resulting in the gradual development of upland conditions despite the persistence of perennial wetland vegetation.

Sierra Club Critique:

The site history does not reflect the factors cited. The site was previously a cultivated Brussels sprouts field that was tilled on an annual basis, breaking up soil compaction to enhance agricultural production. There was no human induced flooding, though the site was irrigated during the summer season during crop production. There is no historic evidence for human induced ponding. Similar patterns of wetland development are evidenced through extensive areas of the first coastal terrace where agriculture has never affected the landscape (e.g., south of Franklin Point, near Half Moon Bay, at Point Lobos, and in extensive areas near Cambria).

Questions:

1. Through historic analyses, which specific factors may have created wetland conditions that have since changed?
2. Is this evidenced currently in the region, comparing both natural and agricultural areas and areas in intermediate seral stages?

31

32

H. Page 11, section 4.1 bullet two

HBG:

Wetland indicator species may appear during periods with prolonged flooding, ponding, and/or surface soil saturation, and subsequently grow to a depth where the plants' roots encounter groundwater allowing them to persist at a site as phreatophytes even if wetland hydrology conditions subsequently disappear.

Sierra Club Critique:

There are variable conditions through time that variably saturate the site and make for a dynamic system. Saturated soils may exist at various depths within the root zone.

Questions:

1. Why doesn't HBG present the data it uses to support previous periods of flooding, ponding, and soil saturation that would have allowed the numerous wetland indicator species to colonize the site?
2. What percentage of the root zone of the wetland indicator species would need to be saturated to allow them to continue thriving in post-saturated conditions?

33

34

I. Page 11, section 4.1, bullet three

HBG:

Species classified as OBL, FACW, and FAC in the NWI lists are not always found in wetlands. NWI classifications are not based on extensive empirical data and may not reflect the actual distribution of plant species in nature. Accordingly, the probabilities of occurrence and subsequent classifications of species as OBL, FACW, and FAC may be flawed. For example, plants classified as OBL and FACW species may occur in uplands far more often than the 1 to 33 percent estimated probability of occurrence assigned to them in the NWI lists.

Sierra Club Critique:

Using this rationale, likewise there is a degree of uncertainty with upland species such that species listed as UPL, NL, or NI may occur in wetlands. *Baccharis pilularis*, for example, is frequently found along the coast in wetlands conditions. A professional review that we contracted suggests that *B. Douglasii* is truly an OBL species in other areas where it occurs.

Questions:

1. Is there evidence from the actual, wide ranging distribution of *Baccharis Douglasii* that it is incorrectly listed as an OBL wetland species?
2. Where else have scientists found a number of wetland indicator species all simultaneously appearing at a site but not “acting as” wetland species?

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J. Page 11, section 4.1 bullet four

HBG:

Species classified as OBL, FACW, and FAC in the NWI lists do not always act as hydrophytes. The definitions of “hydrophyte” and “hydrophytic vegetation” assume the existence of “periodic deficiencies in oxygen as a result of excessive water content” (i.e., anaerobic conditions). Plant species classified as OBL, FACW, and FAC in the NWI lists may occur in areas where they do not experience periodic anaerobic conditions. In these cases, uniformly treating them “hydrophytes” is inappropriate. Plant communities should be considered “hydrophytic” only when the component plants are actually growing as “hydrophytes” (i.e., exposed to periodic anaerobic conditions).

Sierra Club Critique:

We argue that these species are, indeed, acting as hydrophytes at this site, relying on critique of their qualitative analysis of soils saturation.

Questions:

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|----|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----|
| 1. | What does a multivariate statistical analysis of vegetation, soils, and hydrological data for all monitoring sites suggest, especially when comparing existing delineated wetlands with areas suggested by TPAN and the Sierra Club as potential wetlands? | 37 |
| 2. | What are the levels of confidence of these analyses? | 38 |
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K. Page 11, section 4.1, bottom

HBG:

Soils may have hydric characteristics (e.g., redoximorphic features) that developed under conditions that no longer exist at the site (i.e., historical hydric soil indicators). Although these relic features may meet the technical definition of hydric soils, the soils may not be accurately characterized as hydric because they no longer support hydrologic conditions essential to wetland development (i.e., flooding, ponding, or near-surface soilsaturation).¹

Sierra Club Critique:

There is no evidence that there has been the kind of major alteration of the delivery of water to the site is here purported.

Questions:

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|----|--------------------------------------------------------------------------------------------------------------------|----|
| 1. | What evidence is there for a major shift in hydrology as is suggested? | 39 |
| 2. | Aren't the hydric soil characteristics at the site similar to other, non-disturbed soils that occur in the region? | 40 |
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L. Page 12, section 4.1, top

HBG:

Soils may have low chroma values that prevent observation of redoximorphic features, hence preventing their identification as hydric soils without supplemental first-hand observations of flooding, ponding, and/or near-surface soil saturation. In California, which has a Mediterranean climate, these hydrology conditions may be observable only during the rainy season, which does not always correspond to when biologists perform wetland delineations.

Sierra Club Critique:

We have repeatedly requested direct tests of redox potential of the soils, which could have answered this question. At least one set of observations at the site using such tests suggested high redox potential outside of wetlands delineated by HBG. HBG performed at least two season's work during the rainy season where these tests could have been employed.

Questions:

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|----|------------------------------------------------|----|
| 1. | Why did HBG not use redox tests for the soils? | 41 |
|----|------------------------------------------------|----|

2. Wouldn't the data from direct tests of redox potential have added greatly to statistical tests for other wetlands delineation parameters?

42

M. Page 12, section 4.1, first paragraph

HBG:

In some cases, the boundaries between wetland and non-wetland vegetation, hydric and non-hydric soils, and flooded/saturated and nonflooded/ saturated conditions are identical. In other cases, their boundaries do not correspond. Discrepancies between the different boundaries take on critical importance when applying the CCC/FWS approach, making wetland delineations controversial in some cases.

Sierra Club Critique:

Because boundaries are confusing with the various indicators, this increases the importance for protecting large boundary, or buffer, areas around delineated wetlands.

Questions:

1. To what degree do statistical analyses indicate correlations (give *R* value) between soils, hydrology, and plant species wetland indicators at the site?

43

N. Page 12, section 4.1, first bullet

HBG:

False willow (*Baccharis douglasii*), which is listed as an "obligate" wetland species in the NWI list, occurs throughout the property, including areas with upland hydrology conditions;

Sierra Club Critique:

We disagree with the HBG analysis of "upland hydrology" based on their mistaken qualitative division between "wet" and "saturated" soils during their Phase I and Phase II delineations. We believe that the "wet" soils were largely saturated. This issue is clouded by the Phase III delineation quantitative data on soil saturation, which included a new category "very wet" which had not previously been used (in Phases I and II).

Question:

1. What percentage of Phase I and II delineated "wet" soils correlated with the "very wet" category of the Phase III delineation?

44

O. Page 12, section 4.1, second bullet

HBG:

Many wetland areas are dominated by non-wetland or non-listed plant species.

Sierra Club Critique:

We note that the HBG data, instead of reflecting uncertainty when NL plant species were significant portions of the community, used the NL species as UPL species, instead, a false assumption. Species that we note have a high potential of being listed as, at least, FAC species include: *Cotula australis* (misspelled in datasheets), *Bromus catharticus* (misspelled in datasheets), *Baccharis pilularis*, *Hordeum murinum* (misspelled in datasheets)¹.

Question:

1. Why did HBG categorize species of unknown wetlands association as upland species?

P. Page 12, section 4.1, fourth bullet**HBG:**

Clear boundaries between areas dominated by wetland and non-wetland vegetation do not exist;

Sierra Club Critique:

We agree that clear boundaries are difficult to discern and hypothesize that this is due to gradual changes in topography, slow drainage, and the extensive wetlands at the site which create very few areas that are clearly uplands.

Q. Page 12, section 4.1, fourth bullet**HBG:**

Soils on the property developed under crop cover or grasslands and consequently have organic-rich, dark brown surface layers with low chroma values, which inhibit the use of soil color as an indicator of hydric soils conditions and may mask the presence of redoximorphic features.

Sierra Club Critique:

See previous comments on the need to employ other widely accepted methodologies for analyzing redox potential.

R. Page 12, end of section 4.1

¹ Other species that were misspelled in datasheets include: *Geranium dissectum*.

HBG:

For these reasons, wetland delineation at Terrace Point cannot rely solely on the occurrence of hydrophytic vegetation, soil color, and redoximorphic features, but must consider other factors that influence the distribution of wetlands, especially wetland hydrology and soil drainage.

Sierra Club Critique:

We feel that HBG unnecessarily dismisses two crucial elements of the wetland delineation.

Questions:

1. Precisely what factors other than hydrophytic vegetation, soil color, and redoximorphic features does HBG use, other than soil hydrology, in delineating wetlands?
2. What other wetland delineation cases have used similar methodology?

46

47

S. Page 13, Section 4.2 : Remedies

HBG:

HBG use the ‘one parameter approach’ of vegetation and check the distribution of areas with these species against soils hydrology to see if the species are “acting as hydrophytes.”

Sierra Club Critique:

According to Dr. Robert Curry, HBG’s qualitative methodology of discerning between merely “wet” and “saturated” soils is inaccurate, as is reflected by their quantitative check on their methodology in the Phase III delineation. While wetlands conditions at the site persist in this rainy season (2004), we urge independent verification, as soon as possible, and more quantitative analysis of the “wet” category used by HBG.

Question:

1. Where in the literature is there a refutation of using the soil’s sheen as being an indicator of soil saturation?

48

T. Page 18, section 4.3: Study Phases

Sierra Club Critique:

Phase I delineation

Vegetation was sampled during July 2001, well beyond the correct time period for identifying the annual species that dominate many areas of the site. This is particularly important for sites 20 – 22.

Phase II delineation

No date is given for the vegetation sampling, which appears to have occurred too late in the season to note the predominance in many wetland areas of *Oxalis pes caprae*, a species HBG notes is a FACW species. This species tends to begin to disappear beginning mid-March. Note that many species are not “acting as indicators” as there is a predominance of wetland vegetation at many sites although the (often “W” classification) hydrology is not recorded as saturated.

Questions:

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|----|----------------------------------------------------------------------------------------------------|----|
| 1. | What dates were used to sample vegetation at the site? | 49 |
| 2. | Did HBG miss the peak growth of <i>Oxalis pes caprae</i> ? | 50 |
| 3. | Is it possible that HBG missed the peak growth of a number of ephemeral wetland indicator species? | 51 |
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U. Page 23, middle

HBG:

Wet: Water is observable (with the unaided eye) between the soil particles as evidenced by a “sheen” on its surface, but no discharge of free water from the soil particles.

- *Saturated:* Water discharge from the soil particles runs between the fingers.

Sierra Club Critique:

With their description, “wet” would normally be considered field capacity, and thereby saturated.

Question:

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| 1. | What statistical evidence is there that there is a clear distinction between the soils classified as “wet” and the soils classified as “saturated” at the site? | 52 |
|----|-----------------------------------------------------------------------------------------------------------------------------------------------------------------|----|
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V. Attachment 6

Sierra Club Critique:

There are a number of mistakes according to the most recent USFWS list that I have downloaded from the web (1996 summary). These are as follows:

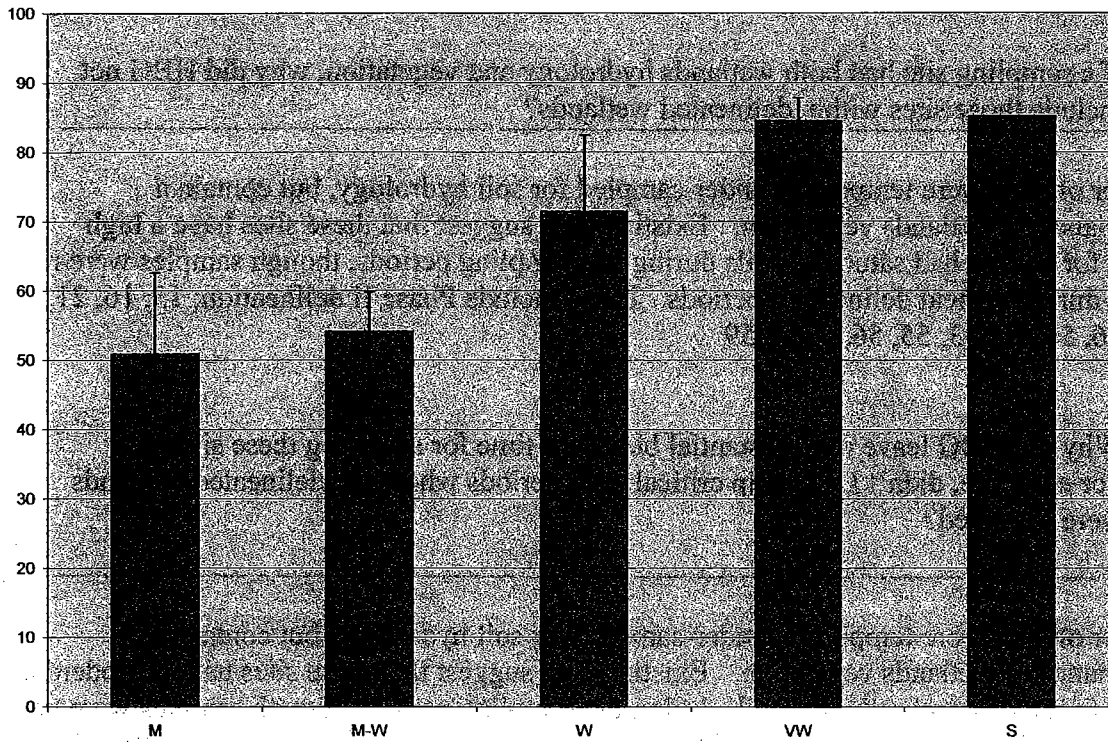
- The dominant *Conyza* species at the site is *Conyza canadensis*, a native species that is listed as a FAC species. | 53
 - *Cotula australis* is listed as FAC* | 54
 - The species of *Callitriche* at the site is *C. heterophylla*, is listed as OBL | 55
 - *Spergularia macrotheca* var. *macrotheca* is listed as FAC+ | 56
 - *Dipsacus fullonum* is listed as FACW | 57
 - *Lythrum hyssopifolium* is listed as FACW | 58
 - *Polygonum punctatum* is listed as OBL | 59
 - *Rumex conglomerates* (*sic*) is listed as FACW | 60
 - *Leymus triticoides* is listed as FAC+ | 61
-

W. Attachment 8

Sierra Club Critique:

It appears that there is no statistical difference between the W and VW categories, although it is difficult to analyze these data because of unequal sample size. It is impossible to compare the saturated soils with the rest of the categories as there is only one saturated soil sample.

A better way of illustrating the data is in the graph that follows. Especially of note is the strong overlap between error bars between the W and VW samples, suggesting the lack of differentiation between these categories.



Questions:

1. Does HBG purport that there is a statistically significant difference between the qualitative categories of soil saturation used at the site?
2. On what basis does HBG make this assumption?

62

63

X. Attachment 11A

Sierra Club Critique:

The following is a critique with questions of the wetlands delineation data sheets.

- Some areas that are delineated as wetlands lack complete vegetation data on the data sheets (vegetation data does not add up to 100% relative cover). Complete vegetation data would help the public understand the role of vegetation in determining these sites as wetlands. These include Phase II delineation: sites 8 & 23b.

Questions:

1. Why didn't HBG present the entire vegetation cover data?
2. Wouldn't the use of a full set of vegetation data aid in determining the extent to which species were or were not acting as hydrophytes?

64

65

- A number of sites meet both wetlands hydrology and vegetation criteria for delineating them as wetlands, but are not so delineated. These include Phase II delineation: 1, 2, 7, 13, 40, & 67

Question:

1. If a sampling site had both wetlands hydrology and vegetation, why did HBG not include those sites within delineated wetlands?

66

- A number of sites were temporally under-sampled for soil hydrology, but contain a predominance of wetlands vegetation. Existing data suggest that these sites have a high potential for having had saturated soils during the sampling periods, though samples were not recorded during critical delineation periods. These include Phase II delineation: 15, 16, 21, 42, 43, 46, 50, 52, 53, 55, 56, 57, & 59

Questions:

1. Why did HBG leave out substantial blocks of time for sampling these sites?
2. For each site, didn't HBG skip critical time periods where the delineated wetlands were saturated?

67

68

- A number of sites were temporally under-sampled for soil hydrology, but contain a predominance of wetlands vegetation. Existing data suggest that these sites have a moderate potential for having had saturated soils during the sampling periods, though samples were not recorded during critical delineation periods. These include Phase II delineation: 17B, 17C, 18, 19B, 34, 39, 54, 58, 60, 65, & 70

Questions:

1. Why did HBG leave out substantial blocks of time for sampling these sites?
2. For each site, didn't HBG skip critical time periods where the delineated wetlands were saturated?

69

70

- A number of sites had substantial wetlands hydrology classification in the wet – “W” – category, but may have been saturated soils. These sites also were classified as having a predominance of wetlands vegetation:

Phase II delineation: 3, 5, 9, 10, 11, 12, 19A, 20A, 21, 23, 31, 36, 44, 48, & 49.

Question:

1. Considering the ambiguity of the soils saturation characterization, what is the chance that each of these sites may have actually met wetlands hydrology characterization?

71

- A few sites were noted as having saturated soils during sufficient time to delineate them as wetlands but had a predominance of “NL” vegetation.
Phase II delineation: 4 & 32

Questions:

1. Especially as they are predominant at this site in the presence of saturated soils, what chance is there that the “NL” vegetation might actually indicate wetlands, but the species were simply overlooked by the list?

72

2. Why does HBG treat NL species as UPL species?

73

- A few sites had sufficient wetlands hydrology classification in the wet – “W” category, which may, in actuality have been saturated soils, and were dominated by “NL” vegetation. Phase II delineation: 35, 38, 43, 44, 45, 56, 62, 64, 66, & 71.

Question:

1. Given the uncertainty of qualitative determination of soils saturation, is it possible that the “NL” vegetation might here indicate wetlands?

74

- A few sites were temporally under-sampled for soil hydrology, but were not noted as having a predominance of wetlands vegetation. Existing data suggest that these sites have a moderate potential for having had saturated soils during the sampling periods, though samples were not recorded during critical delineation periods. These sites include: Phase II delineation: 14, 24, 69, and 71.

Questions:

1. Why did HBG not sample soil saturation during crucial periods for these sites?
2. Why did HBG not include these sites in its delineated wetlands?

75

76

- Some sites did not have sufficient data recorded for vegetation, perhaps because of oversights in the data collection process. These sites include: Phase II delineation: site 63

Question:

1. Why did HBG not list all of the vegetation at this site?

77

- The following species are wetland indicators and co-dominate in many areas of the site, throwing into question the hypothesis that species could “not be acting as hydrophytes” although they are listed: Phase II delineation: Baccharis douglasii, Lolium multiflorum, Juncus effusus var. pacificus, Oxalis pes-caprae, Rumex crispus, Melilotus indica

Questions:

1. What other wetland delineation professionals and with what similar projects have precluded this substantial of a list of listed wetland species as not “acting” as wetland species?
2. What impact would the precedent of this sort of action have on other wetlands delineations along California’s coast?

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COMMENT LETTER ORG-2: MARILYN FRAVEL, SIERRA CLUB

ORG-2-1: Meeting requirements of the Coastal Act is a stated purpose of the CLRDP (see CLRDP pages I-1 and IV-8). For that purpose, policies of the Coastal Act relevant to the specific circumstances of this site are reflected and incorporated throughout the CLRDP, and mitigation measures to achieve consistency with Coastal Act requirements are integrated into the plan. After a public hearing in December 2000, the Coastal Commission identified Coastal Act issues to be addressed in the planning process. Appendix A of the CLRDP contains a summary of Coastal Act issues and related elements of the plan.

The Draft EIR has addressed Coastal Act issues in two ways. First, they are included in the presentation of environmental information, analysis of impacts, and consideration of mitigation measures throughout the Draft EIR. Second, Section 4.9, Land Use and Planning, contains detailed discussion of applicable provisions of the Coastal Act and its implementing regulations and considers responses of the CLRDP to the applicable provisions of the Coastal Act. (Draft EIR pages 4.9-15 through -58.) Table 4.9-1 provides a detailed analysis of the CLRDP's consistency with Coastal Act policies.

The ultimate decisions regarding the CLRDP's consistency with the Coastal Act, including coastal dependency, will be made by the Coastal Commission when it reviews the plan for certification. For that purpose, the Commission will consider information in this EIR, as well as any supplementary information submitted by the University, interested public agencies and individuals, and Commission staff. The applicable procedures are found in CA Section 30605, and 14 Cal. Code of Regulations Sections 13518-13540. The Commission's review of the CLRDP is itself subject to requirements of CEQA. However, the Commission's review program has been certified under Public Resources Code Section 21080.9 as the functional equivalent of an EIR. Therefore, no additional EIR will be required, although Commission review is subject to requirements similar to those of CEQA.

In evaluating consistency of the CLRDP with the Coastal Act, the Coastal Commission can reasonably be expected to rely on that Act's definitions of key terms. Coastal Act Sections 30101 and 30101.3 define "coastal-dependent development" and "coastal-related development," respectively, as follows:

“Coastal-dependent development’ means any development or use which requires a site on, or adjacent to, the sea to be able to function at all.”

“Coastal-related development’ means any use that is dependent on a coastal-dependent development or use.”

The CLRDP indicates that the type and location of development to be allowed on the site was determined in light of these definitions (CLRDP pages IV-8, V-10). The Draft EIR considers the manner in which the CLRDP addresses these location criteria on Draft EIR pages 4.9-3 to 4.9-32.

The Coastal Commission has previously found that the marine research and education activities of the Long Marine Laboratory as well as the CDFG and NMFS facilities are coastal-dependent uses of high priority under the Coastal Act. See, for example, Commission findings in CDP P-1859 (original laboratory facilities), CD 50-98 (NMFS fisheries research laboratory and expanded seawater intake), CDP 3-83-076-A12 (expansion of CDFG oil spill response facility), and CDP 3-83-076-A13 (Center for Ocean Health). As with existing facilities, the new facilities will require access to large quantities of fresh seawater. The plan also includes outdoor research areas that require a marine environment.

Prior Commission approvals of coastal-dependent development on this site have covered a reasonable range of activities necessary to the core research and education functions. Those projects have included, for example, administrative space, service buildings, parking, and workshop areas as part of development described as coastal-dependent. A survey of the percentage of floor area devoted to coastal-dependent uses and uses requiring access to sea water is beyond the capacity of the EIR. All of the research and education structures reflected in the CLRDP will require access to fresh seawater or proximity to structures that do require seawater access, and are coastal-dependent, even though some of the activities, if considered in isolation, might not be coastal-dependent.

ORG-2-2: Please see the response to comment ORG-2-1.

ORG-2-3: A ground lease and leaseback agreement with the DFG specify that a total of approximately one-half of the space most applicable to research support is for use by the University in support of its research mission. The NMFS facility is on federally owned property and such agreements are not in place. However, the NMFS and DFG contribution to the University's teaching and research mission goes beyond the provision of research space. As the campus' resources to develop new research facilities are limited, the partnerships with state and federal agencies have provided significant opportunities for collaborative research involving both faculty and students. Further, the presence of these facilities has broadened the scope of the University's marine research capabilities by bringing new programs and scientists to the campus.

ORG-2-4: The time and space that future non-University facilities located on the campus will contribute to the University's teaching and research mission cannot be quantified at this time. Please see the response to comment ORG-2-3 above for a discussion of the benefits that such facilities provide to the University.

ORG-2-5: To the extent that space allocated for use by the University is specified in an agreement between the University and its partners, such an agreement may be reviewed by the public upon request.

ORG-2-6: The wetlands receive water from stormwater runoff and rainfall. YLR receives water from stormwater that flows into the lagoon from the adjacent properties, from rainfall landing on the water surface, and also from the shallow groundwater. Groundwater enters YLR through seeps along the bluffs that are fed by the shallow groundwater (see Draft EIR, page 4.8-16).

According to the wetlands specialist who conducted the delineation of wetlands on the site, the periodic soils analysis of the soil profiles taken during the rainy season demonstrated that the wetlands are being supplied with direct rainfall and stormwater runoff, and not by groundwater. This is demonstrated by the presence of variations in soil saturation by depth within the soil profile. There is a relatively impervious layer of clayey sand to clay soils (brown clay loam) at about 17 to 18 inches in the soil profile that is found to be moist at all times (refer to the Draft EIR, page 4.6-5 for detailed description of soil profiles). If the wetlands were supplied with a subsurface ground water aquifer then this layer would be saturated. Saturated soils were found beneath this layer indicating that there is groundwater further down in the soil profile, but not within the root zone of the vegetation.

Shallow groundwater in the water table flows beneath the Marine Science Campus and some of it flows out of the coastal bluffs and the bluffs along YLR through seeps (see *Groundwater*, Draft EIR, page 4.8-15 and *Groundwater Flow to Bluffs*, Draft EIR page 4.8-16). There is not one constant proportion that can describe the quantity of water supplied to YLR and ocean from surface versus groundwater because these two water sources vary considerably by many factors including season, topographic conditions, and localized characteristics of the water table. Attempting to quantify such a proportion through actual observation and measurement would require many years of surface and ground water data gathering from several locations on the site. This level of study is typically not practical because the final data set would likely not provide a repeatable, constant proportion that could be accurately applied to this site. Further, measuring the amount of water exiting the ground at the seeps on the bluffs would be problematic given the very low flow rate, location of seeps, and seasonal variations in flow. Rather than attempting to quantify the actual amount of groundwater that flows to YLR and ocean, the Draft EIR analysis considered the increase of post-development impervious surfaces that would alter surface flows and reduce water table infiltration (Draft EIR pages 4.8-27, 4.8-33).

ORG-2-7: Analysis necessary to formulate the stormwater management strategy under the Stormwater Concept Plan of the CLRDP included the use of direct mathematical calculations and the application of mathematical models to determine pre-development and post-development flow rates and volumes. However, analysis for the Draft EIR did not include groundwater modeling because of the lack of historic and reliable groundwater data. Successful modeling efforts depend on accurate and consistent input data to obtain a dependable result. Modeling can be a useful tool to provide an understanding of the surface/groundwater relationship in some groundwater regimes, but if the input data is not accurate or not available, the results of the model can be skewed and do not provide useable data. For example, calibrating a model to estimate subsurface flows from the groundwater seeps to the lagoon would probably not yield a realistic result because the input data that the model requires would be based on assumptions and not actual flow measurements (also see response to comment ORG-2-6). Refer to the analysis of groundwater impacts in the Draft EIR, page 4.8-27 for details regarding the effects of the proposed CLRDP on groundwater resources.

ORG-2-8: The water table beneath the proposed project area is contained in surficial alluvial materials and is known as an unconfined groundwater system (Draft EIR, page 4.8-14). Unconfined groundwater is under atmospheric pressure and therefore fluctuates seasonally and flows from a topographic high to a topographic low. The bedrock underlying the water-bearing soil dips (tilts) towards the south at an angle ranging between 2 and 5 degrees (Draft EIR, page 4.6-4). The bedrock acts as the lower boundary of the water table and therefore controls the general trend of groundwater flow. Although non-uniform alluvial materials and irregularities in the bedrock may alter groundwater flow in certain areas, the overall groundwater flow gradient is low (0.5 to 1 percent) and its direction is from the north to the south towards the ocean. Varying groundwater flow directions are further discussed in the Draft EIR starting on page 4.8-15.

ORG-2-9: As analyzed in the Draft EIR, compaction, utility placement, and other development under the CLRDP could alter groundwater flows to the bluffs and YLR. As discussed in response to comment ORG-2-6, the wetlands are being supplied with direct rainfall and stormwater runoff, and not by groundwater. As discussed in the Draft EIR, the CLRDP could result in a reduction of pervious area that would otherwise provide infiltration to the water table. This impact is discussed in the Draft EIR (pages 4.8-27 through 28) and was found to be less than significant. Rather than attempt to quantify the amount of water that would not reach the water table from the surface, the Draft EIR analysis considered the total acreage that would be converted from pervious surfaces to impervious surface for the entire development program and near-term projects. In general, the analysis determined that the proposed development would occur on only 13 acres of the 73-acre site and from a per basin standpoint, new projects would result in only a minimal increase in impervious surfaces. Reduction of water flow to and from the wetlands due to subsurface utility placement would not occur because, under the CLRDP, development would not occur within the wetlands, and a prescribed protection buffer would limit encroachment from adjacent development. In other areas of the Marine Science Campus, utility line placement associated with the proposed CLRDP would not significantly change surface water infiltration, nor would it reduce the amount of groundwater that would otherwise infiltrate, because the area occupied by the proposed utilities would be minor compared to the amount of available infiltration area.

Impacts to subsurface flows would be minimized by implementation of CLRDP policies. The CLRDP requires that within each drainage basin, no more than 70 percent of land shall be impervious and at least 30 percent shall be maintained as pervious surfaces. The CLRDP also includes Policy 7.1.6, *Groundwater Recharge* that requires the University to develop and manage a stormwater system on the Marine Science Campus that maintains groundwater recharge rates at pre-CLRDP levels to the maximum extent practicable, through the use of infiltration systems. As stated in the Draft EIR, the promotion of surface water infiltration through the storm water ponds and swales would serve to offset infiltration capacity lost due to impervious surfaces added under the CLRDP.

ORG-2-10: A feature known as a “sag pond” sometimes forms at the surface overlying an active strike slip fault. In sag ponds, surface water occupies an enclosed depression where active or recent fault movement along a strike-slip fault has impounded drainage. San Andreas Lake in San Mateo is a sag pond and so is Lake Temescal along the Hayward Fault in Oakland. According to the literature reviewed for the Draft EIR (page 4.6-1), no active or recently active faults are known to exist at or adjacent to the Marine Science Campus, and therefore it is unlikely that the ponds on the project site are a result of faulting. Refer to the Draft EIR (page 4.6-8) for a detailed discussion of nearby and regional faults.

ORG-2-11: As discussed in the Draft EIR (page 4.6-8), there are potentially active and inactive earthquake faults near and in the Santa Cruz region; however, there are no mapped active or potentially active faults under the Marine Science Campus. Because there are no faults on the site, no setbacks are necessary for the building proposed under the CLRDP. As discussed in the Draft EIR (page 4.6-2) the State of California has identified and zoned several active earthquake faults in California that could cause surface fault rupture and damage to structures. The zones encompassing these active faults are called Alquist-Priolo Earthquake Fault Hazard Zones. Construction within these zones is regulated and in some cases prohibited. There are no active faults or established Alquist-Priolo Zones on the Marine Science Campus. Please refer to response to comment ORG-2-10 regarding the connection between “sag ponds” associated with fault activity and ponds on the Marine Science Campus.

ORG-2-12: As discussed in the Draft EIR (refer to pages 4.7-10 through 4.7-12), historical land use activities on portions of the Marine Science Campus included orchards and row crops. Steven Raas & Associates conducted an investigation for the presence of residual pesticides in 1995 at the project site and concluded that the pesticides dieldrin, DDT, DDD, and DDE were present in the surficial soils. Applied Science and Engineering, Inc., conducted further study in 1997 to estimate the health risk posed by residual pesticides detected at the site. The 1997 investigation included additional surface soil sampling at the site, and the results from both the 1995 and 1997 sampling investigations were evaluated using the CalTOX health risk assessment model. Additional assessment, conducted for the Draft EIR during September and October 2002, addressed the presence, extent, concentrations, and human health risk of residual pesticides in the shallow soils at the Marine Science Campus site. UCSC completed the 2002 soil assessment in accordance with the California DTSC’s “Interim Guidance for Sampling Agricultural Soils,” which was developed for evaluating soils at proposed new school sites and/or new school construction expansion projects. The DTSC guidance provides a conservative sampling approach to collecting data for health risk assessment modeling. Laboratory analysis determined that onsite soils contain organochlorine pesticides including chlordane, DDT, DDD, and DDE. These concentrations were compared to specified residential land use health-based EPA-Preliminary Remediation Goals (EPA-PRGs) to determine which constituents may be considered to be of concern. Residential land use EPA-PRGs are the lowest and considered most protective as compared to the higher industrial land use EPA-PRGs. All constituents of organochlorine pesticides detected during the 2002 assessment were well below the Residential land use EPA-PRGs. Contrary to the comment letter, these soils do not “contain toxic concentrations of DDT and breakdown products, so much so that they cannot be removed from the site without a permit

for disposing toxic waste.” Soils that contain low levels of pesticides can be disposed and in some cases reused, provided UCSC complies with applicable State and Federal regulations.

CalTOX is a spreadsheet model that assists in health risk assessments of contaminated soils and the adjacent air, surface water, sediments, and groundwater. CalTOX has been used to model residual pesticides in surface soils at the Marine Science Campus on two occasions. The 1997 CalTOX modeling effort used surface soil data collected during the 1995 and 1997 soil sampling investigations to assess health risk exposure. The 2002 CalTOX modeling analysis used only new surface soil data collected during a 2002 sampling investigation. For both CalTOX model runs, the assumptions employed were conservative. The conservative application of the CalTOX Multimedia Exposure Model in 1997 and again in 2002 indicated that residual pesticides measured in the soil at the Marine Science Campus pose a level of risk to human health that is well below normally accepted values.

ORG-2-13: If soils become contaminated or contaminated soils are discovered during development activities at the Marine Science Campus, UCSC would dispose of those soils in accordance with State and Federal regulations. Please also refer to response to comment ORG-2-12 regarding disposal of soils containing low residual levels of organochlorine pesticides.

ORG-2-14: Previous soil assessment efforts identified low residual concentrations of organohlorine pesticides in the soils at the Marine Science Campus (refer to response to comment ORG-2-12). It is generally recognized that these types of materials can adhere to sediments and if eroded, could eventually wash into the wetlands or Younger Lagoon Preserve (Draft EIR pages 4.8-12, 4.8-24). Under current conditions, this would likely occur less on the Marine Science Campus than on agricultural fields adjacent to YLR because pesticides are no longer used on the Marine Science Campus. Furthermore, unlike agricultural operations that occurred historically on the campus site and periodically disturbed on-site soils, the soils on the campus are not disturbed by routine campus activities. A “yearly threshold of tolerance” does not currently exist, however, under the Policies and Implementation Measures proposed under the CLRDP (Draft EIR, page 4.8-22) and the drainage and erosion improvements under the Stormwater Concept Plan, erosion and sediment would be significantly decreased through the use of source control and treatment Best Management Practices (BMPs) (refer to Draft EIR, page 4.8-29). This would dramatically reduce or eliminate the amount of sediment released into the ESHAs. Drainage from the agricultural fields adjacent to YLR would not be improved and residual agricultural chemicals eroded from these fields would continue to be washed into YLR.

ORG-2-15: Commitment to long-term protection of the ESHAs on the Marine Science Campus will be provided by the policies in the CLRDP and the Mitigation Monitoring Plan (MMP) adopted in connection with the approval of the CLRDP. Numerous CLRDP implementation measures focus on the University avoiding actions that could adversely affect the resources on site. Numerous implementation measures are focused on improving the resources that are there. The University is required by state law to implement and monitor every measure listed in the MMP. Implementation will be monitored on an ongoing basis and reported in an annual report which can be reviewed by the interested public upon request.

ORG-2-16: The University has committed to implementing the proposed mitigation measures, and has developed a MMP that outlines how and when the mitigations will be implemented. Adoption of the MMP is a legal commitment on the part of the University to implement the proposed mitigation measures. The University has evaluated the feasibility of all mitigation measures included in the MMP, which includes an assessment of the fiscal feasibility of the measure.

ORG-2-17: The University will designate the Utility Prohibition Zone on campus maps. Because the University does not intend to sell the land, a deed restriction, the mechanism typically used to alert subsequent buyers, would be a less effective mechanism than documenting this restriction on campus maps and in the CLRDP itself. The designation on campus maps will alert future campus planners that extending utilities in the designated area is prohibited.

ORG-2-18: The commenter appears to be asking for clarification of footnote 74 in the Biological Resources section. Sensitive raptors were a criterion used by the City of Malibu in developing its Local Coastal Plan. There is no particular basis for comparison with Terrace Point, because Malibu defined its ESHAs very broadly, to include riparian areas, streams, native woodlands, native grasslands/savannas, chaparral, coastal sage scrub, dunes, bluffs, and wetlands, “unless there is site-specific evidence that establishes that a habitat area is not especially valuable because of its special nature or role in the ecosystem.” Regarding the vole population, see the response to comment ORG-2-20.

ORG-2-19: Winter use by a variety of raptors of Coast Dairies (about ten miles away) is a widely noted phenomenon. A total of 405 individual observations of 10 species of raptors (9 diurnal, 1 nocturnal) were observed during seven surveys from December 5, 2000 to January 26, 2001.¹⁶ These data have been gathered quantitatively at Coast Dairies, but that area is unlikely to be unique in the region.

ORG-2-20: Vole populations are highly cyclic, and are not regularly monitored in a systematic way. However, vole populations thrive in a variety of grazed and ungrazed California grasslands (see for example Fehmi, J.S. and J.W. Bartolome. 2002. *Species richness and California voles in an annual and a perennial grassland*. Western North American Naturalist 62(1) pp. 73-81).

ORG-2-21: There are two methods frequently used to assess the reduced nature of the soil, a color metric test using a chemical for detecting ferrous iron (indicative of soil anaerobic condition), and measuring redox potential with platinum probes. Both tests have significant problems that may affect the readings.¹⁷ For this reason these techniques were not employed.

¹⁶ ESA, 2001. *Coast Dairies Existing Conditions Report*, prepared for the Trust for Public Land.

¹⁷ Tiner, Ralph W. 1999. *Wetland Indicators. A Guide to Wetlands Identification, Delineation, Classification and Mapping*. Lewis Publishers.

Soils representative of the qualitative soil moisture descriptors used (moist, wet, very wet and saturated) were collected and soil moisture was measured using following the quantitative water content analysis procedures described by Hillel and Klute.¹⁸

ORG-2-22: See response to comment ORG-2-21.

ORG-2-23: The 1987 U.S. Army Corps of Engineers (ACOE) wetland delineation manual defines the growing season as follows: “The portion of the year when soil temperatures at 19.7 inches below the soil surface are higher than biologic zero (5° C). For ease of determination this period can be approximated by the number of frost-free days.” The treatment of the growing season as year-round in the wetland delineation conducted by the Huffman-Broadway Group (HBG) is consistent with this definition.

ORG-2-24: Qualified professionals regularly rely on the U.S. Fish and Wildlife Service’s National Wetland Inventory (NWI) list of plant species that occur in wetlands to delineate wetlands. Qualified professionals also regularly use professional judgment when making wetland determinations and do not solely rely on the prevalence of vegetation, but instead rely on other factors identified in the field together with their technical experience when making their professional wetlands determinations. The wetland delineation conducted by the HBG also uses the NWI list, but does not rely on the presence of species classified as facultative (FAC), facultative wetland (FACW), and obligate (OBL) in the NWI list as unequivocal evidence of the presence of wetlands where upland hydrology or soils conditions persist.

ORG-2-25: HBG characterizes Terrace Point soils as young because they are relatively young on a geologic basis. The 1987 ACOE wetland delineation manual defines permeability as follows: “A soil characteristic that enables water or air to move through the profile, measured as the number of inches per hour that water moves downward through the saturated soil. The rate at which water moves through the least permeable layer governs soil permeability.” HBG characterizes Terrace Point soils as permeable in accordance with this definition. The characterization is supported by the descriptions of the soil types found on site as reported in the Natural Resource Conservation Service (NRCS) soil survey for Santa Cruz County, and HBG’s observations of downward water movement through the soil profile during the hydrologic monitoring period.¹⁹

ORG-2-26: Page 9 of HBG’s January 2004 report states that “coastal low clouds and fog are common, especially during the late night and early morning hours, which act as a supplemental water source for vegetation and keep soils moist through much of the year.” It does not indicate that moist soils are maintained throughout the year.

¹⁸ Hillel, D. 1982. *Introduction to Soil Physics*. Academic Press, Inc. San Diego, CA, pp. 57-60; Klute, A. 1986. *Methods of Soil Analysis, Part I-Physical and Mineralogical Methods*. Soil Science Society of America, Inc.

¹⁹ U.S. Department of Agriculture, Natural Resources Conservation Service (NRCS). 1980. *Soil Survey of Santa Cruz County*.

ORG-2-27: HBG does not contend that Terrace Point soils do not have potential to be hydric. As described on page 10 of HBG’s January 2004 report: “Each of the soil series onsite has the potential to support hydric soils, irrespective of whether they appear on the local county hydric soils list.”

ORG-2-28: HBG analyzed historic aerial photos to develop an understanding of historical land use and vegetation patterns on Terrace Point. Attachment 2 of the report contains a list of historical aerial photos analyzed, and page 10 presents findings of the analysis. The photos themselves were not included in the report because they were not considered germane to the wetland delineation, which was based on current, rather than historic, conditions.

ORG-2-29: See response to comment ORG-2-38.

ORG-2-30: See response to comment ORG-2-38.

ORG-2-31: Drainage ditches and crop furrows that were used in the cropping of the site were abandoned. These areas served to convey stormwater runoff in a similar manner as their use to irrigate and drain the site. When the farming ceased maintenance of these irrigation/drainage structures also ceased and these drainages began to fill with sediment and/or erode away. As a result of this, stormwater is now either trapped in these areas and ponds due to the lack of effective drainage, or where the structures have filled or eroded away, ponding in these areas has ceased over time due to the lack of a landform to contain ponded water or the soils have become less compacted resulting in the area becoming effectively drained by the natural process.

Throughout the nearby coastal region, wetland conditions that have occurred as a result of the cessation of agricultural activities and the subsequent evolution of portions of these areas to upland conditions are readily observable. An example is the abandoned crop land located at the proposed North Wavecrest Village Site adjacent to State Highway 1 in the City of Half Moon Bay California.

ORG-2-32: See response to comment ORG-2-31.

ORG-2-33: The passage to which the commenters refer is presented as an instance in which the U.S. Fish and Wildlife (FWS)/California Coastal Commission (CCC) one-parameter wetland delineation approach may become problematic. It is not meant to suggest that Terrace Point experienced previous periods of flooding, ponding, and soil saturation that allowed numerous wetland indicator species to colonize the site.

No studies that attempt to determine what percentage of root zone saturation is required to allow wetland indicator species to persist in post-saturated conditions were identified in the course of conducting the wetland delineation. Such an analysis was not necessary for wetland delineation and the authors do not speculate in the absence of meaningful data.

ORG-2-34: See response to comment ORG-2-33.

ORG-2-35: HBG's studies on Terrace Point show that on the project site, false willow (*Baccharis douglasii*) occurs in areas with strong evidence of upland hydrology (i.e., absence of wetland hydrology). No studies on the distribution of *Baccharis douglasii* were identified that indicate whether it is or is not correctly classified in the NWI list. The decision to list the species as a hydrophyte was based on generalized references to its ecological habitat associations and the subjective vote of a panel of biologists as to as an OBL, FACW, FAC, FACU or UPL. It is not uncommon, in California's mediterranean climate, to find a number of plants listed by the NWI as hydrophytes on sites without hydric soils and thus not functioning as wetland plants. Examples of plants commonly found in these situations include Italian ryegrass, salt grass, rabbits foot grass, brass buttons, various sedges and rush species, sourdock, and willows.

ORG-2-36: See response to comment ORG-2-35.

ORG-2-37: HBG's January 2004 report follows CCC and ACOE wetland delineation methodologies, neither of which requires the use of multivariate statistical analysis.²⁰ Such analysis was therefore not part of the wetland delineation study.

ORG-2-38: See response to comment ORG-2-37.

ORG-2-39: The passage to which the commenters refer is presented as an instance in which the U.S. Fish and Wildlife (FWS)/CCC one-parameter wetland delineation approach may become problematic. It is not meant to suggest that Terrace Point has experienced a major shift in hydrology. Wetland delineation, in compliance with the Army Corps of Engineers and Coastal Commission wetland delineation guidelines, does not require an analysis of the historic hydrology of the site.

The soils at the site have been disturbed. The soils hydrology at the site has been disturbed by agricultural and associated drainage activities. The soils hydrology has also been disturbed by associated adjacent development activities. Hydric soil characteristics found at the site are similar to those found on disturbed sandy loams elsewhere in the region such as Half Moon Bay, California.

ORG-2-40: See response to comment ORG-2-39.

ORG-2-41: See response to comment ORG-2-21 above.

ORG-2-42: See response to comment ORG-2-21 above.

ORG-2-43: As described above in response to comment ORG-2-37, HBG's January 2004 report follows CCC and ACOE wetland delineation methodologies, neither of which requires the use of multivariate statistical analysis. Such analysis was therefore not conducted as part of the study. Consequently, the authors do not speculate to what degree statistical analyses indicate correlations between soils, hydrology, and plant species wetland indicators at Terrace Point.

²⁰ California Coastal Commission. 1981. *Statewide Interpretative Guideline for Wetlands and Other Wet Environmentally Sensitive Habitat Areas*.

ORG-2-44: CCC staff suggested that HBG add the “very wet” category before the initiation of Phase III studies. An after-the-fact analysis cannot be completed to determine what percentage of soils characterized as “wet” in Phases I and II would have fallen within the “very wet” category in Phase III because HBG does not have a record of the physical data that would allow for such a distinction. The relevance of this question is not clear because neither the “wet” nor “very wet” field descriptor categories was considered to meet the field interpretation saturated category (although HBG conservatively included the very wet category be representative of saturated soil conditions in making the wetland determination) where limited oxygen levels enable hydric soil conditions to occur. In fact soil moisture analysis conducted by HBG indicated that even the soils determined to be saturated had less than 90 percent soil saturation (value between zero and 1 [or zero and 100 percent]). This is not surprising given the porous nature of the sandy loam soils found within the upper soil profile at the site. A 90 percent or greater level of soil saturation has been determined by soil scientists²¹ as the level of saturation where anaerobic soil conditions that cause hydric soil conditions begin. All of the soil classifications (moist, wet, very wet, saturated) used in the field as field descriptors are indicative of saturated soil conditions (or zero and 100 percent), however the field classification “saturated” represents the soil condition observed in the field that is closest to where limited oxygen levels enable hydric soil conditions to occur. Use of the field descriptor term “saturated” therefore represents a conservative view of conditions where saturated soil conditions are near the greater than 90 percent threshold at which hydric soil conditions begin to occur.

ORG-2-45: HBG interprets “species of unknown wetlands association” to mean species that are not listed in the National Wetland Inventory (NWI) list of plant species that occur in wetlands. HBG disagrees with the commenters’ assertion. As described on page 8 of HBG’s January 2004 report, species that are not included in the NWI list were assigned a “not listed” (NL) designation. They were not assumed to be upland (UPL), facultative upland (FACW), facultative (FAC), facultative wetland (FACW), or obligate (OBL) species.

ORG-2-46: In accordance with ACOE and CCC wetland delineation guidelines, HBG considered all three diagnostic wetland characteristics (i.e., hydrology, soils, and vegetation). At the request of University and CCC staff, HBG conducted detailed analyses of soil saturation. Soil saturation is evaluated in most other wetland delineations, although specific analytical methods employed vary based on site-specific conditions and best professional judgment. This approach is consistent with COE and CCC wetland delineation guidelines, which allow deviations in sampling design and/or data collection procedures to match characteristics of the site being delineated. HBG therefore respectfully disagrees with the commenters’ assertion that two crucial wetland delineation elements were dismissed.

ORG-2-47: See response to comment ORG-2-46.

ORG-2-48: The 1987 ACOE wetland delineation manual identifies several indicators of hydric soils and wetland hydrology. Hydric soil indicators include organic soils (histosols), histic

²¹ Pilot, Luc, and W.H., Patrick Jr. 1972. *Soil Science*. Vol. 114, No. 4: pp. 312-316; Faulkner. 1975. Personal Communication (letter).

epipedons, sulfidic material, aquic or peraquic moisture, reducing soil conditions, soil colors, soil appearing on hydric soils list, and iron and manganese concretions. Wetland hydrology indicators include drainage patterns, drift lines, sediment deposition, watermarks, stream gage data and flood predictions, historic records, visual observation of saturated soils, and visual observation of inundation.

Soil sheen is not identified as an indicator of saturated soils within these lists or the supporting discussion. Soil sheen indicates that water is present within the soil, but not the percentage of saturation (or zero and 100 percent) or percentage of available water. It is a field descriptor only, and does not quantify what is actually present in terms of soil water content. In the laboratory analysis, described on page 20 of HBG's January 2004 report, most soils observed to exhibit a sheen in the field fell within the "wet" and "very wet" categories, but were not found to be saturated sufficiently to bring about hydric soil conditions. For these reasons, HBG does not believe soil sheen is a good indicator of saturated soil conditions that are at a level where anaerobic soil conditions occur to a level (90 percent or greater) which bring about hydric soil conditions as explained above.

ORG-2-49: Vegetation was sampled at many points in time during the April 2001-January 2004 study period, including the peak growth of *Oxalis pes caprae* and other ephemeral wetland indicator species. As indicated in Attachments 11a and 11b of the HBG report, *Oxalis pes caprae* was observed at several sampling locations (e.g., 17c, 25-29, 31, 35b, 50, 60, 64, 71). Therefore, it is not possible that the peak growth of a number of ephemeral wetland indicator species were missed.

ORG-2-50: See response to comment ORG-2-49.

ORG-2-51: See response to comment ORG-2-49.

ORG-2-52: HBG's January 2004 report follows CCC and ACOE wetland delineation methodologies, neither of which requires the use of statistical analysis. The soil moisture categorization developed by HBG with input from CCC staff was based on observable soil physical characteristics (i.e., field observations). Results of the soil water content/volume analysis described on page 20 of HBG's January 2004 report suggest this method provides a reasonably accurate means to differentiate between moist, wet, and saturated soil conditions.

ORG-2-53: The 1996 draft NWI list to which the commenters refer has never been finalized, therefore this list was not followed. The 1988 NWI list still is in use. The plants listed by the commenter show the correct listing following the 1988 manual, except for *Cotula australis*, *Dipsacus fullonum* and *Leymus triticoides*, all of which are not listed in the 1988 NWI list. The other species listed by the commenter occur on the 1988 NWI list. Their indicator status was inadvertently miss-transcribed in preparing the report documentation. This correction to the report plant list notation has been made. A review of the vegetation data in Attachments 11a and 11b indicates that neither the corrected 1988 NWI classifications nor use of the 1996 draft NWI classifications would change any of the plant community dominance (preponderance) determinations made in the HBG's January 2004 report.

ORG-2-54: See response to comment ORG-2-53.

ORG-2-55: See response to comment ORG-2-53.

ORG-2-56: See response to comment ORG-2-53.

ORG-2-57: See response to comment ORG-2-53.

ORG-2-58: See response to comment ORG-2-53.

ORG-2-59: See response to comment ORG-2-53.

ORG-2-60: See response to comment ORG-2-53.

ORG-2-61: See response to comment ORG-2-53.

ORG-2-62: As described above, the soil moisture categorization developed by HBG with input from CCC staff was based on observable soil physical characteristics (i.e., field observations). They were used as a means to describe and categorize soil moisture conditions observed in the field. CCC and ACOE wetland delineation methodologies do not require the use of statistical analysis.

ORG-2-63: See response to comment ORG-2-62.

ORG-2-64: HBG's January 2004 report follows CCC and ACOE wetland delineation methodologies. In accordance with these methods, the vegetation cover analysis focused on the dominant species making up the plant community. The January 2004 report presents the entire vegetation data set collected during field studies. Additional vegetation data would not be expected to be useful in determining the extent to which species were or were not acting as hydrophytes. Hydrophytes by definition depend on wetland hydrology conditions (flooding, ponding and/or soil saturation within the major portion of the root zone), which are or are not present irrespective of the plant species under consideration.

ORG-2-65: See response to comment ORG-2-64.

ORG-2-66: Observations made during significantly above-normal rainfall events were excluded from consideration.

ORG-2-67: The purpose of the hydrologic monitoring was to identify locations with flooding, ponding, and soil saturation within the major portion of the root zone for long durations (greater than 7 continuous days) following normal rainfall conditions. For this reason, periods 7 days after normal rainfall events were targeted to conduct hydrologic monitoring. The month of January was not used in the analysis due to significantly above normal rainfall events that occurred either in the preceding and/ or during the month of January 2002 and 2003. The December 2002 and 2003 rainfall amounts greatly exceeded normal rainfall conditions (approximated by the 2 year frequency interval) by well over 100 percent (see HBG Report,

Attachment 15). These are events that are greater than a 2-year frequency event. Periods during which there were extended weeks of low or no rainfall were not sampled. Soil sampling was conducted at representative sites with blocked and unblocked surface and near surface (upper 12 inches) drainage during the period from January 30 and April 24, 2004, at either a 7-day interval, or a shorter, more conservative number of days (4 to 5) following major rain events. If found to be “not saturated” within the major portion of the root zone, these areas were excluded from consideration as being saturated to the point that hydric soil conditions could occur. Given the drainage characteristics of the sandy loam soils at the site, wetlands were only found to be present where there was blocked surface or near surface drainage. Soils within these areas were found to be saturated or very wet and/or ponded for long periods of time. Data collected in 2003 result in similar findings to those in 2002. The data also showed, based on variable moisture levels within the various soil profiles examined, that storm water following major storm events moved laterally through the sloping soils at a fairly rapid rate unless drainage was blocked. This was evident in that the soils did not fill with water and pond for extended periods unless drainage was blocked.

Samples were taken following major rainfall events which allowed for the drainage characteristics to be followed. Most soils were found either to be moist or wet within the majority of the root zone except where blocked surface or near surface drainage conditions occurred. Not surprisingly a preponderance of wetland vegetation (OBL and FACW) was found within these areas where ponding and/or saturated soils (VW to S “field descriptors”) occurred.

ORG-2-68: See response to comment ORG-2-67.

ORG-2-69: See response to comment ORG-2-67.

ORG-2-70: See response to comment ORG-2-67.

ORG-2-71: The soil saturation characterization was done in accordance with CCC and ACOE wetland delineation methodologies, which allow for such detailed analysis, and input from CCC staff. Based on the data collected and presented in HBG’s January 2004 report, HBG believes that none of the sites with soils characterized as “wet” were actually saturated given the porous nature of the sandy loam soils found within the areas in question, and that the soil saturation characterization is therefore not ambiguous. Wetlands at the site are the result of water collecting long enough during peak rainfall events before it evaporates, being transpired by growing vegetation or draining to create hydric soil conditions. Areas likely to have wetland conditions given the site conditions at Terrace Point are sites with low-lying depressions, drainages and areas adjacent to blocked surface drainage.

ORG-2-72: As described above, species that are not included in the NWI list were assigned a “not listed” (NL) designation. They were not assumed to be upland (UPL), facultative upland (FACU), facultative (FAC), facultative wetland (FACW), or obligate (OBL) species. HBG does not speculate on the possibility that NL species actually may be indicative of wetlands. HBG notes that several areas dominated by NL species or otherwise not supporting a preponderance of wetland indicator species were delineated as wetlands due to the presence of wetland hydrology

and soil conditions. Following the commenter's implied suggested approach; these areas would have been overlooked as wetlands.

ORG-2-73: See response to comment ORG-2-72.

ORG-2-74: As described on page 11 of HBG's January 2004 report, the definitions of "hydrophyte" and "hydrophytic vegetation" assume the existence of "periodic deficiencies in oxygen as a result of excessive water content" (i.e., aerobic conditions). Based on soil moisture observation made at the site, HBG has determined that NL vegetation at the sites in question is not hydrophytic, or acting as hydrophytes, or otherwise indicative of wetlands because the site lacks evidence of hydric soil conditions.

ORG-2-75: The HBG sample analysis excluded from consideration periods where significantly above-normal rainfall events occurred.

HBG did not include such sites for the reasons stated above.

ORG-2-76: See response to comment ORG-2-75.

ORG-2-77: Under the Corps and CCC wetland delineation methodology it is not necessary for purposes of wetland delineation to inventory all of the vegetation on the site.

ORG-2-78: As described in the ACOE 1987 wetland delineation manual, "sole reliance on vegetation or either of the other parameters as the determinant of wetlands can sometimes be misleading." In accordance with this principle and the probabilistic nature of NWI list of plant species that occur in wetlands, best professional judgment often leads wetland delineation professionals not to consider species listed as facultative (FAC), facultative wetland (FACW), or obligate (OBL) as unequivocal evidence of the presence of wetland conditions. This practice already is in place along the California coast and elsewhere in the United States. The CLRDP wetlands work establishes no precedent in this respect.

ORG-2-79: See response to comment ORG-2-78.

TERRACE POINT ACTION NETWORK

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UCSC

MAR 19 2004

Campus & Community Planning

Mr. Charles Eadie
Environmental Assessment Group
University of California
515 Swift Street
Santa Cruz, CA 95060

Dear Mr. Eadie:

Please find attached comments on the DEIR and Wetlands Report for the UCSC Marine Science Campus.

As you may know, we have been working with the Sierra Club and Barney Elders, Esq. to prepare our comments on this development. We agree with and support the comments they are submitting.

Please let me know if you need further information.

Sincerely,



Renwick E. Curry, PhD



Nancy C. Knudegard

Received by UCSC

Name

Date

TPAN Comments on Draft Environmental Impact Report

January 2004

Submitted March 19, 2004

Development Priorities and Coastal Dependency Issues

Page 4.9-31

Regarding specific criteria that constitutes “coastal dependency”:

- a. What percentage of research functions rely on sea water access? | 1
- b. Regarding all proposed development in the short term CLRDP vision, what fraction of a building’s or agencies activities must meet coastal dependent criteria? | 2
- c. Would it not be more appropriate to contact world class marine research centers such as Scripps and WHOI about the need for support housing, rather than Bodega Marine Laboratory, Friday Harbor Marine Laboratory, and the Wrigley Insitiute? | 3
- d. What fraction of an employee or students functions must meet coastal dependent criteria? | 4
- e. What accountability is there for monitoring or documenting performance measures in meeting coastal dependent criteria? | 5
- f. Rigorous evaluation by the Coast Commission of “coastal dependent” criteria as applied in the CLRDP is necessary to ensure appropriate projects are to be built on Terrace Point, especially as relates to the housing component (apartments and townhouses), and the support component (motel-type rooms, short-term housing, food service facilities, stand alone auditorium and conference facilities with meeting rooms, caretaker housing and recreational/sports courts). | 6
- g. What criteria will be used for "coastal-dependency" of on-site activity? | 7
- h. What fraction of a building's employees or floor-area must require a site in the coastal zone? | 8
- i. What fraction of the 226 occupants of the current buildings meets these criteria, by building? | 9

Regarding the proposed timeline of development for near-term and short-term projects as defined by the CLRDP:

- a. If there is delay in agencies or affiliates coming to the site, but not in university growth, what will prevent use of the site for housing of general university faculty, staff and students? 10
- b. If staff and students do not spend most of their time on site, which would be unlikely until there is expansion of university research labs on Terrace Point, then what prevents them from being commuters to the main campus and adversely increasing traffic impact? 11
- c. Such delays would change the perception of the project as mostly on-site jobs and supporting housing. It would also affect the traffic analysis which now envisions only ~10% of trips being up Western. 12

Population and Housing

Page 4.12-9 Places of Residence for UCSC students, faculty and staff

- a. Since UCSC currently houses only 42 percent of the student population on-campus, what written criteria will determine eligibility for on-site housing of university faculty, staff, graduate students, and undergraduates? 13
- b. What are the minimum requirements (e.g., what percent time would they be expected to work or study on-site averaged over one year)? 14
- c. How many of the current occupants would choose to live on-site if given the option? In posing this question, the university should estimate likely rents and size of housing units. 15
- d. What will prevent students, faculty and staff from choosing off-site housing due to non-competitive rental prices for Marine Campus housing? This is currently occurring with housing on the main campus. 16
- e. What will happen if there are vacancies in housing units beyond the demand created by people meeting the written criteria of item a? 17
- f. Since the Pacific Shores apartment complex (at Shaffer and Mission) is almost complete, why not utilize this housing source instead of constructing new housing in a coastal zone area? This facility is within walking distance of the Marine Campus. This DEIR does not address this option. 18
- g. Since UCSC has recently acquired the former Texas Instruments building, why not use some of this existing facility to accommodate projected needs for an auditorium, meeting rooms, conference facilities, overnight stay rooms, and dining facilities, source instead of constructing non-coastal dependent buildings in a coastal zone area? The TI building is on a bus line 19

and within walking distance of the Marine Campus. This DEIR does not address this option.

19

h. There are two motels approximately a mile from the proposed Marine Campus (at Swift and Mission). Why not develop contracts with these motels to satisfy short-term stay demand instead of building new non-coastal dependent facilities for this purpose in a coastal zone area? This DEIR does not address this option.

20

i. Why is the housing component (townhouses and apartments) being constructed in the near term range? Since this is a non-coastal dependent usage, this component would be considered at the end of the CLRDP, in the year 2020, and then *only if necessary*. Other housing sources exist, including ample space for further housing development on the main campus.

21

Water Supply

Page 4.16-17

The DEIR identified the fact that cumulative development on the west side of Santa Cruz, including the CLRDP, would result in increased cumulative demand for water in a system that does not have adequate supplies. Despite General Mitigation Measures 4.16-1a, 4.16-1b, 4.16-1c and 4.16-1d, the DEIR states:

“ Although these mitigation measures will minimize the use of potable water on the Marine Sciences Campus and thereby minimize the project’s contribution to the cumulative impacts from development of new water supply sources, it is not known whether the entire water deficit will be adequately addressed, and whether all environmental impacts associated with the SCWD water supply projects would be reduced to a less than significant. Therefore conservatively, this EIR concludes that the impact would be significant and unavoidable.”

Given the unavoidable adverse impact on water supply:

a. One of the alternative plans described in the EIR, utilizing less water, should be considered the primary goal. Why shouldn’t there be no further development until new sources of water are developed by the City of Santa Cruz?

22

b. Table 4.16-3, on page 4,16-10, shows that the housing component and food service component, will contribute over 50% of the projected water demand for the Marine Science Campus. Why not utilize the existing housing

23

- supply (Pacific Shores Apartments, TI building, Mission Street restaurants) and food service facilities already available in the community to fill these needs, thus reducing projected water usage by over 50%? | 23
- c. Table 4.16-3, on page 4,16-10, shows that the housing component and food service component, will contribute over 50% of the projected wastewater generation for the Marine Science Campus. Why not utilize the existing housing supply (Pacific Shores Apartments, TI building, Mission Street restaurants) and food service facilities already available in the community to reduce projected wastewater generation by over 50%? | 24
- d. Why shouldn't the DEIR projected water demand for the Marine Sciences Campus consider the west side development of a Home Depot and Lowe's, as well as other retail establishments, proposed for the Natural Bridges Industrial Park? This would drastically worsen the already significant and unavoidable impact on water supply. | 25
- e. If the necessary additional sources of water are not developed by the City of Santa Cruz, what prevents the University from proceeding with the full CLRDP, despite significant and unavoidable impacts on water supply? | 26

Noise, Air Quality, Hazardous Waste Issues

The DEIR proposes several mitigations measures to reduce impacts from noise, construction activities, hazardous materials, and light pollution.

- a. Have the strong prevailing winds been accounted for in determining the noise and odors? | 27
- b. What procedures are in place to ensure that the suggested mitigation measures regarding noise, air quality, and light pollution will be established? | 28
- c. What procedures are in place to ensure that the suggested mitigation measures regarding noise, air quality, light pollution will be enforced? | 29
- d. Who will be responsible for monitoring the mitigation measures in the DEIR, other than "the University"? | 30
- e. Who does the public contact if these mitigation measures are not established or monitored and enforced, other than "the University"? | 31
- f. Will there be separate entities responsible for establishing, monitoring and enforcing mitigations of impacts on human populations, wildlife populations, and sensitive environmental habitats? Who are these entities | 32

and who, *specifically, should be contacted in the case of failure to comply with mitigation measures?*

32

Traffic

Page 4.15-33

Traffic impacts were found to create a significant and unavoidable impact by the DEIR.

a. Traffic Impacts 4.15-1, 4.15-3, 4.15-4, 4.15- 5 and 4.15-6 were found to be significant impacts. The General Mitigation Measures 4.15-1 and 4.15-6 that are supposed to address these impacts are dependent on intersection improvements approved by Caltrans. Furthermore, “Proposed improvements are not feasible in the available right-of-way based on lane widths required by Caltrans minimum design standards. Therefore, this impact is considered significant and unavoidable”. How does the University propose to these traffic impacts if Caltrans does not approve the proposed improvements or if proposed improvements are not feasible in the available right-of-way?

33

b. Traffic projections used in the DEIR are two years old (March 2002) and do not consider the west side development of a Home Depot and Lowe’s, as well as other retail establishments, proposed for the Natural Bridges Industrial Park. Why shouldn’t these new projects be included in the DEIR traffic analysis?

34

c. Traffic projections used in the DEIR are two years old (March 2002) and do not consider the increased traffic contributed by the UCSC acquisition of the Texas Instruments building. Why shouldn’t the traffic of the new Texas Instruments acquisition be included in the DEIR traffic analysis?.

35

d. Why is there so little use of the current shuttle service between the site and university main campus (~5 passengers/day)?

36

e. Does this mean there is little interaction between the activities of the two sites? Or that most people who travel between the sites do so by car?

37

f. What will be effect on the High Street/Western Drive intersection (current LOS=D) if the majority of people **living** in the project housing units make one round trip/day to the main campus by car?

38

g. What will be effect on the High Street/Western Drive intersection (current LOS=D) if the majority of people **working** at the site make one round trip/day to the main campus by car?

39

h. If the necessary approvals are not received by Caltrans, the City of Santa Cruz or other third parties, what prevents the University from proceeding with the full CLRDP, despite significant and unavoidable impacts on traffic?

40

Wetland Buffers

Circa Page 4.4-54

- a. Wetlands are dynamic, and change size and shape year after year
- b. Evidence of this comes from the Wetlands consultant, HBG, who prepared the wetlands report for UCSC.
- c. There was a major expansion of wetlands from the HBG 2001 delineation and the HBG 2003, delineation, especially in the area of W3.
- d. The linear extent of the expansion was more than 200 feet in a period of two years.
- e. This expansion was not due to a lack of 2001 sampling in the new area of W3. The HBG report shows a Phase I transect line of hydrology, vegetation, and soil sampling through the new part of W3. See Attachment 4a.

Question

Since the wetlands show an ability for significant expansion in the period of a few years, why shouldn't the wetland buffers be 150 feet or 200 feet instead of 100 feet to allow for future expansion of the wetlands?

TPAN Comments on HBG Final Report

January 2004

SUBMITTED MARCH 19, 2004

1. Page 18, Paragraph 2

- a. Regarding the timing of the TPAN observations, HBG says that “In addition, over 2.5 inches of rainfall had occurred within the 7-day period prior to January 9, 2002.
- b. HBG is relying on the De Laveaga station observations, more that 5 miles away from Terrace Point, when there is a met station on Terrace Point at LML.
- c. TPAN submitted an analysis comparing the De Laveaga station rainfall and the LML rainfall so that historical analyses could be made.
- d. Terrace Point precipitation is approximately half of the De Laveaga station.
- e. HBG was well aware of the Terrace Point met station data.
- f. The Terrace Point (LML) observations shows the last rainfall at 7:30am local time on January 2, 2002, which is more than 7 24-hour periods before the first TPAN observations were made. Moreover, the rainfall amount at the Terrace Point station during the preceding 24 hours was only 1.39 inches, not the 2.5 inches reported by HBG

Questions

- 1. Why does HBG say that there is 2.5 inches of rain within a 7 day period before the first TPAN observation? 42
- 2. Why does HBG use the De Laveaga met station data when the Terrace Point station gives more accurate data? 43

2. Pages 19-20: Soil Moisture Classification

Phase II and Phase III used a different number of soil moisture categories.

- a. “Saturated” criteria were the same in Phase II and Phase III
- b. Phase III “Very Wet” samples are judged to be less than “Saturated” in the field.
- c. However, some “Very Wet” samples in Phase III turned out to be “Saturated” by soil water content/volume analysis.
- d. In other words, some samples judged “less than Saturated” in the field are actually “Saturated”.

- e. Therefore, some fraction of all “Wet” observations in Phase II must be “Saturated”

Questions:

- 1. What fraction of Phase II “Wet” observations should be reclassified as “Saturated”? 44
- 2. What fraction of Phase III “Wet” and “Very Wet” observations should be reclassified as “Saturated”? 45
- 3. Since some of the Phase II “Wet” samples and some of the Phase III “Very Wet” samples should be reclassified as “Saturated”, why should not the following points be reclassified as wetlands? 46

Points 44, 58, 59, 1, 2, 13

3. Page 21: “Normal Rainfall”

- a. Data taken between January 16, 2002 and January 31, 2002 were not used in the HBG analysis because of the above normal rainfall in December 2001
- b. But in January 2002, just before the observations, HBG shows that rainfall was 50% below normal (Attachment 15)

Questions:

- 1. What specific quantitative observations were used to determine that January 30, 2002 conditions were equivalent to “after normal rainfall”? 47
- 2. If the inclusion of January 16, 2002 data results in only four additional sample points as wetlands (31, 40, 42, 43), does this not suggest that January 16, 2002 data are perhaps representative of after normal rainfall too? 48
- 3. Where is the CCC specification for observations to be taken after “normal rainfall”? 49

Attachments 13a and 13b, Wetlands Determination Tables

4. Value of Ponding Observations

- a. All but two ponding observations used for wetland determination (i.e., on or after 01/31/02) for both Phase II and Phase III were taken with at least 0.5 inches of rainfall in the previous 7 days. The exceptions were observation date 02/15/02, which had 0.97 inches on 02/07/02 (actually 0.42 inches per the Terrace Point station), and observation date 01/31/03, which had 0.27 inches in the previous 20 days, with the largest daily amount of 0.18 inches 10 days prior to 01/31/03.

- b. The stated rationale for wetland determinations needs to assume that the conditions existing on 01/31/03 continue for 7 days after 01/31/03. See for example, the rationale for point 7a, Phase III.
- c. Sample 23b in Phase II declared a wetland “..with strong evidence of wetland hydrology in the form of ponding and soil saturation for greater than 7 continuous days”, but no soil measurements were taken and the ponding level was 0 inches on the only valid ponding observation date (02/15/03).

Questions

- 1. What is the value of ponding observations since only one observation date was near a 7-day-after-rainfall epoch? | 50
- 2. Is it not true that the only valid ponding observations were those taken by TPAN in January 2002 and HBG on January 16, 2002? | 51
- 3. Why didn't HBG take ponding observations at the 7-day-after-rainfall epoch to evaluate ponding? | 52
- 4. If Sample Point 23b is declared a wetland based on ponding observations, why aren't many other points be declared wetlands too? | 53

5. Credibility of Wetland Hydrology Rationale

- a. Every rationale for Phase II sampling points deemed as not having wetland hydrology for Phase II states “**Strong evidence** of upland hydrology.” [Emphasis added]
- b. Every rationale for sampling points deemed as not having wetland hydrology for Phase III states “Field data collected during 2003 rainy season provide **strong evidence** that wetland hydrology and soil criteria were not met.” [Emphasis added]
- c. There is a wide variability in the number of soil moisture observations that were designated as “saturated through the major portion of the root zone”. The following table gives some examples of this, but not all, along with the wetland determination.

Phase	Sample Number	# observations “Saturated through major portion of the root zone”	Total # of soil moisture observations	Deemed a wetland?
II	1	3	7	N
II	2	2	7	N
II	6	3	7	Y
II	20B	1	2	Y

II	22	4	6	Y
II	48	3	7	N
II	49	3	7	N
II	55	2	4	N
II	59	2	4	N
II	61	3	5	Y
II	67	2	4	N
III	6	1	4	Y
III	35	0	2	Y

Questions:

1. With this wide range of observations of “Saturation through the major portion of the root zone”, why is there only one category of upland hydrology evidence, “Strong Evidence”, when the data indicate otherwise? 54
2. Each sample point has a number of sample dates declared as having “Saturation through the major portion of the root zone”. How was this number used to determine evidence of wetland or upland hydrology? 55

6. Mapping of Sample Number 39

- a. In Phase II Sample Number 39 did not meet wetland criteria.
- b. In Phase III Sample Number 39 did meet wetland criteria.
- c. Sample Number 39 was not mapped on the final 2003 wetland map because of “...**significantly greater than normal rainfall** occurring after January 30, 2002” [emphasis added].
- d. Examination of Attachment 15 shows just the opposite, that rainfall after January 30, 2002 was substantially less than normal:

Month	Percent of Normal Rainfall (Attachment 15)
January 2002	55%
February 2002	58%
March 2002	85%
April 2002	20%

Questions

- | | |
|-----------------------------------------------------------------------------------------------------------------------------------------------------|----|
| 1. Why doesn't the data in Attachment 15 contradict the HBG assertion that rainfall after January 30, 2002 was "significantly greater than normal"? | 56 |
| 2. What is the basis for stating that the rainfall after January 30, 2002 was significantly greater than normal? | 57 |
| 3. Why doesn't the less-than-normal rainfall after January 30, 2002 explain the lack of hydrology indicators during the 2002 rainy season? | 58 |
| 4. Why isn't Sample Number 39 mapped as wetland? | 59 |

7. Different Treatment of Sample Numbers 35, 39, and 46

- a. Sample Numbers 35, 39, and 46 were all declared wetlands in Phase III but not declared wetlands in Phase II
- b. Sample Numbers 35 and 46 were mapped as wetlands, but Sample 39 was not
- c. The rationale for not mapping Sample Number 39 was based on rainfall data
- d. Rainfall data that apply to any one Sample Number should apply to all Sample Numbers.

Questions:

- | | |
|----------------------------------------------------------------------------------------------------------------------------------------|----|
| 1. How can Sample Numbers 35, 39, and 46 be mapped differently using the rainfall argument? | 60 |
| 2. How can the rainfall argument be used considering that actual rainfall contradicts the assertion of the argument? See Item 6 above. | 61 |
| 3. If Sample Numbers 35 and 46 are mapped as wetlands, how can Sample Number 39 <u>not</u> be mapped as a wetland? | 62 |

8. Evaluation of Sample Number 59

- a. Two of four sample dates in Phase II declared Sample Number 59 to have "Saturation through major portion of the root zone".
- b. Observations taken during Phase III showed soil moisture levels of "W-VW" and "W+"
- c. Attachment 8 shows there is a large variability of actual moisture content in each field classification
- d. Arguments above show that some points classified as less than "Saturated", e.g., "VW" and "W", should be actually classified as "Saturated"

Questions:

- | | |
|---------------------------------------------------------------------------------------|----|
| 1. How can it be said that Sample Point 59 has “Strong evidence of upland hydrology”? | 63 |
| 2. Why isn’t Sample Number 59 declared a wetland? | 64 |

Attachment 13c

9. Comments on the definition of No Strong Evidence (NSE), and explanation for points 5 and 39,

- a. The definition of NSE in the footnotes says that there was 2.5+ inches of rainfall on January 7 and 8, 2002, one and two days before the TPAN sample pits were dug. The De Laveaga station used by HBG, and the LML station show no rainfall on these dates. In fact, the Terrace Point (LML) observations shows the last rainfall at 7:30am local time on January 2, 2002, which is more than 7 24-hour periods before the first TPAN pit was dug. Moreover, the rainfall amount at the Terrace Point station during the preceding 24 hours was only 1.39 inches, not the 2.5 inches reported by HBG
- b. The TPAN soil pits filled with water within 2 minutes, with the water seeping in at all levels.
- c. Exposed sides in the pits could become impervious to water entering the pit opening, and rainfall might accumulate in the pit, giving a higher indication of water level than is true.

Questions:

- | | |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----|
| 1. What is the basis for HBG statement that there was 2.5+ inches of rainfall on January 7 and 8, 2002? | 65 |
| 2. What evidence does HBG have that the pits filled with stormwater runoff and upslope subsoil drainage? | 66 |
| 3. Since the pits filled with water within 2 minutes, and since there was no rainfall during the TPAN observation period, why isn’t water level on subsequent days a measure of ground water level at that sample point at that instant of time? | 67 |
| 4. In particular, the following points had water levels within 6 inches of the surface 14 days since the last rainfall.
5, 12, 32, 39, 43, 44, 48, 51, 53, 55, 56, 57, 58, 59, 67, 20T, 39T, 7T
Why are not these points wetlands? | 68 |

10. Comments on the evaluation of Sampling Point 58

- a. Ponding is clearly visible in the picture of 01/09/02 when there is no pit, and also visible on 01/12/02 beyond the area of the pit.
- b. Ponding is going to occur in the rut before the mound between ruts.
- c. Any “piled dirt” is on the mound side of the pit, therefore not blocking the rut.
- d. HBG’s comments agree that there is ponding outside and around the pit, at least until 01/16/02, 14 days after the previous rainfall.

Questions:

- 1. What is the basis for stating “piled dirt partially blocked the rut?” | 69
- 2. Is there not ponding at least through 01/12/02, 10 days after the last rainfall? | 70

11. Comments on the evaluation of Sampling Point 59

- a. Ponding is clearly visible in the picture of 01/09/02 when there is no pit, and also visible on 01/12/02 where there is no pit.
- b. Ponding is going to occur in the rut before the mound between ruts.
- c. There is no “piled dirt” in these photos
- d. HBG’s comments agree that there is ponding outside and around the pit, at least until 01/16/02, 14 days after the previous rainfall.
- e. HBG Phase II and Phase III hydrology data show saturation in the root zone and wetland vegetation.

Questions:

- 1. What is the basis for stating “piled dirt partially blocked the rut?” | 71
- 2. Is there not ponding at least through 01/12/02, 10 days after the last rainfall? | 72
- 3. Given the TPAN pictures and the HBG data, why isn’t Sample point 59 a wetland point? | 73

12. Comments on the evaluation of Sampling Point 44

- a. The ground water level from the TPAN observations at sampling point 44 remained nearly constant at 6 inches below the surface for 7 to 14 days after the previous rainfall.

Question:

- 1. Why isn’t sample point 44 deemed a wetland? | 74

13. Comments on the evaluation of Sampling Point 64

- a. The ground water level from the TPAN observations at sampling point 64 started at 4 inches below the surface at 7 days after the previous rainfall, and dropped to 9 inches below the surface 14 days after the previous rainfall.
- b. Besides the ground water level, there was a sulfur odor 14 days after the last rainfall.

Questions:

- 1. Why isn't sample point 64 deemed a wetland?

75

14. Comments on TPAN Sampling Points 20T, 31T, 36T, 39T, and 7T

- a. There are no data sheets for these TPAN sampling points
- b. All these points are evaluated as NSE (No Strong Evidence) by HBG
- c. All these points also state "also based on observations at nearby sites..." which were as far away as 175 feet
- d. The photographs at sampling points 20T, 7T, and 39T shows deep ponding and algae mats.
- e. Points 20T, 7T, and 39T are in HBG designated wetlands.

Questions

- 1. Since there are no data sheets, what observations were used to produce the "NSE" evaluation?
- 2. How can an accurate assessment be made based on observations taken 175 feet from the point being evaluated?
- 3. Since points 20T, 7T, and 39T are in HBG designated wetlands, and since there is strong photographic evidence of ponding, etc., how can it be said in Attachment 11c that there is No Strong Evidence for wetlands at these points?
- 4. Does this apparent discrepancy reflect on the credibility of HBG's delineation process?

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COMMENT LETTER ORG-3: RENWICK E. CURRY, Ph.D., NANCY C. KNUDEGARD, TERRACE POINT ACTION NETWORK

ORG-3-1: Please see the response to comment ORG-2-1.

ORG-3-2: Please see the response to comment ORG-2-1.

ORG-3-3: During the development of the proposed housing program for the CLRDP, the University contacted several laboratories located in similar tourist communities or other locations where there are competing demands for housing. Each of these laboratories, which included Woods Hole Oceanographic Institute, Bodega Marine Laboratory, the University of Washington Friday Harbor Laboratories, and the University of Oregon at Charleston, recommended that the University include housing for scientists, students, and staff in the CLRDP because they all faced shortages of this type of housing due to the nature of their coastal communities. The discussion on page 4.9-31 of the Draft EIR only cites a representative sample of these responses. Scripps Institution of Oceanography is essentially adjacent to the UC San Diego campus, where there are housing opportunities. Scripps is also in the middle of a large urban area (La Jolla/San Diego), where there are many more nearby housing options available than in Santa Cruz.

ORG-3-4: Please see the response to comment ORG-2-1.

ORG-3-5: Once the CLRDP is certified, the University must adhere to these requirements, like all others of the CLRDP. The University will review specific building projects for conformity with the CLRDP. Under CA Section 30606, the Coastal Commission will be notified and provided with opportunity to review each project for consistency with the CLRDP.

ORG-3-6: See the responses to comments SA-3-73 and ORG-2-1.

ORG-3-7: See the responses to comments ORG-2-1 and ORG-3-6.

ORG-3-8: See the responses to comments ORG-2-1 and ORG-3-6.

ORG-3-9: See the responses to comments ORG-2-1 and ORG-3-7.

ORG-3-10: The University anticipates that by the time the short-term projects are built out the housing would be over-subscribed. However, as stated in CLRDP Implementation Measure 2.4.1, other University housing needs would be accommodated on an interim basis. Also see the response to comment SA-3-75.

ORG-3-11: The trip generation for the near-term and long-term projects accounts for vehicle travel to and from the main campus by students, faculty, staff, and visitors. To reduce the level of anticipated vehicle trips, UCSC will maintain (and expand as necessary) shuttle service to provide an alternative to single-occupant vehicles traveling between the main campus and the MSC.

UCSC is committed to pursuing the goal of 30 percent of all trips made by means other than a single-occupant vehicle.

ORG-3-12: The transportation analysis acknowledges that the on-site housing, while providing an option for Marine Science Campus employees, staff, and others to live onsite, would generate some external vehicle trips. These trips were included in the analysis as shown in Table 4.5-10 and would be made by tenants for purposes of work, shopping, recreation, etc. The overall project trip distribution is based on the fact that, although a portion of the trips generated by the new uses at the site would be students traveling to and from the UCSC Main Campus, the majority of new trips would be made by employees, staff, and visitors and would originate from the greater Santa Cruz area and beyond.

ORG-3-13: See the response to comment SA-3-75.

ORG-3-14: See the response to comment SA-3-75.

ORG-3-15: Based on the history of the UCSC main campus, where housing is consistently fully occupied, the campus does not anticipate that there would be difficulty in filling the proposed housing units on the Marine Science Campus.

ORG-3-16: Please see the response to comment ORG-3-15.

ORG-3-17: Please see the response to comment ORG-3-10.

ORG-3-18: It is true that Pacific Shores Apartments are within easy walking distance of the Marine Science Campus and it is likely that, due to the proximity of the housing complex, some students, faculty, and staff of the Marine Science Campus would live there. However, given the shortage of affordable housing in Santa Cruz, the need for the University to reduce its burden on the local housing market, and the need to provide the opportunity for a fully integrated learning and research experience that comes from living on campus, the University has proposed a limited amount of housing in the CLRDP. Note that only a small percentage of the total campus population would be housed onsite.

ORG-3-19: The campus has identified other uses for the Texas Instruments property that are suited to the existing office and warehouse facilities.

ORG-3-20: Please see the response to comment ORG-3-18. Motels are used for short-term housing to some extent, but there are times when motels rooms are not available near the Marine Science Campus.

ORG-3-21: Housing constructed in the near term is intended to fulfill the housing needs the University anticipates would be generated by other near-term Marine Science Campus projects. The University will continue to construct new housing on the main campus as needed, to the extent that it is consistent with the Long Range Development Plan for the main campus. It is likely that some of the Marine Science Campus students, faculty, and staff would live in this

housing. As explained in the response to comment ORG-3-18, on-campus housing is included in the CLRDP to provide a fully integrated educational and research community.

ORG-3-22: Please note that the EIR includes the Reduced Program Alternative that would require less water than the CLRDP as proposed. The Reduced Program Alternative, analyzed on page 5-12 through 5-16, would develop approximately 42 percent less marine research and teaching space than the CLRDP, and water usage under this alternative would be expected to be proportionally lower. It would reduce but not avoid the significant unavoidable cumulative effect of the CLRDP with respect to regional water supply.

Regarding the commenter's suggestion that no further development be allowed in the City of San Cruz until a new source of water is developed, the University finds that such a moratorium on the development at the Marine Science Campus will conflict with the goals and objectives of the CLRDP which are to develop this campus into a world-class marine research and education facility. The University has committed to implement water conservation measures (General Mitigation Measures 4.16-1a and c). The University has also committed to implement General Mitigation 4.16-1b, which states that if and when the City adopts policies requiring all projects within the water system to offset new water demand, or any other water demand reduction policies, the University will consider voluntary compliance with the City's policy.

ORG-3-23: Water use associated with the housing and housing/food services has been included in the assessment of the CLRDP's overall water demand. As stated on pages 3-10 and 3-11 of the Draft EIR, the proposed CLRDP seeks to "create a campus with the functionality to provide support to scientists, students, and administrators who need meals, meeting places, and lecture halls." While using existing off-site locations could reduce water demand associated with the CLRDP at the site, this demand would not necessarily "disappear." Increases in water demand would be associated with project-related population growth (e.g., increases in students, staff, and visitors), and the absence of housing/food service uses at the site would "shift" demand to other locations. The provision of these uses on the project site, rather than at offsite locations, contributes to the project's overall goals and objectives and plausibly reduces personal automobile trips, vehicle miles traveled, and air quality effects. Please see the responses to comments ORG-3-18 and I-4-60.

ORG-3-24: The same rationale may be applied to the project's wastewater effects as described above in the response to comment ORG-3-23.

ORG-3-25: The Draft EIR considered growth in the Westside Study Area in the evaluation of cumulative impacts. As discussed on Draft EIR page 4-7, this consideration is based on specific probable future projects for which development applications have been filed, or that are in review, have been approved, are under construction, or will be completed and occupied. As of the publication of this Final EIR, the Lowes' proposal has been withdrawn and is no longer being considered by the City of Santa Cruz. The City is currently evaluating the Home Depot proposal, which was filed with the City after the Draft EIR for this project was published. That notwithstanding, the Draft EIR assesses the cumulative impact on water supply based on the growth assumed by the City in the preparation of its Integrated Water Plan in conjunction with

growth under the CLRDP, and concludes that there would be a significant unavoidable (cumulative) effect with respect to regional water supply deficits until additional supplies have been identified and developed.

ORG-3-26: CEQA requires that the Lead Agency balance the economic, legal, technical, or other benefits of a project against the significant avoidable impacts (CEQA *Guidelines* Section 15093). When approving a project with significant unavoidable impacts, the Lead Agency must prepare a written statement of overriding considerations that explains why the agency is willing to accept each of the significant environmental impacts. The statement of overriding considerations must be supported by “substantial evidence” in the EIR or elsewhere in the record. Section 4.15 of the Draft EIR identifies six significant traffic impacts as significant and unavoidable because the mitigation may be infeasible and/or the University cannot guarantee its implementation because the mitigation requires approval by another jurisdiction. Under CEQA, The Regents may approve the CLRDP, if it determines that the benefits of the CLRDP outweigh these impacts and prepares a statement of overriding considerations.

ORG-3-27: No substantive sources of objectionable odors were found to be present, so there was no need to determine the dispersion of odors that would occur over distance.

Noise calculations for future traffic sources used the FHWA model, a standard noise model. Noise exposures due to future operation of facilities were also calculated using standard noise algorithms, as described in the EIR. It is not customary, nor is it necessary, for this analysis to make corrections for wind speed or air temperature in any of these noise calculations.

ORG-3-28: A Mitigation Monitoring Program (MMP) is included in the Final EIR and covers both mitigation measures identified in the EIR and those CLRDP policies and implementation Measures that were included in the CLRDP to avoid or minimize environmental impacts analyzed in the EIR. The MMP will be adopted by The Regents at the time the EIR is certified. The purpose of the MMP is to ensure that the mitigation measures and project revisions identified in the EIR are implemented. The MMP lists monitoring and reporting procedures, the timing of mitigations, and the office or agency responsible for the monitoring and reporting. Similar to its practice with the 1988 LRDP for the main campus, the campus will monitor and prepare a monitoring report on an annual basis. This report will be available for public review upon request.

ORG-3-29: Please see the response to comment ORG-3-28.

ORG-3-30: Under CEQA, as the Lead Agency, the University is responsible for implementation of the MMP (see the response to comment ORG-3-28 for an explanation of the MMP). Once the CLRDP is certified, like all other CLRDP conditions of approval, the University must adhere to the EIR mitigations. Specific building project proposals will be reviewed by the University for conformity with the CLRDP. Under CA Section 30606, the Coastal Commission will be notified and provided with an opportunity to review each project for consistency with the CLRDP.

ORG-3-31: The public can contact the UCSC Vice Chancellor for Business and Administrative Services to report mitigation measures that have not been implemented.

ORG-3-32: See the response to comment ORG-3-30. The proposed CLRDP does not involve filling of wetlands considered jurisdictional by the Army Corps of Engineers. Nor would it affect any stream or creek that is under the jurisdiction of the California Department of Fish and Game. Therefore no federal or state permits are needed, and there would not be any additional mitigation that would be imposed on the development, other than that presented in the CLRDP EIR.

ORG-3-33: As provided by CEQA and its *Guidelines*, the anticipated project impacts have been disclosed, mitigation measures have been identified, feasibility of improvements to mitigate impacts has been assessed, and UCSC has agreed to provide fair-share contributions for those improvements. However, the Draft EIR acknowledges that implementation of the improvements depends on the actions of other agencies and that the improvements may prove to be infeasible within the existing right-of-way. Because of these uncertainties, the Draft EIR treats these impacts as significant and unavoidable.

ORG-3-34: See the response to comment LA-2-1.

ORG-3-35: See the response to comment LA-2-1, which explains the methodology used to estimate future background traffic volumes and provisions in the analysis for future projects such as the Home Depot project or the UCSC acquisition of the Texas Instruments (TI) property, which occurred after the CLRDP Draft EIR was published. Please note that the campus acquired the TI property in order to consolidate UCSC administrative office space presently housed in off-campus leases primarily on the west side of the City of Santa Cruz but also in the downtown area. The University is also considering relocating to the TI site staff that is currently in crowded and inadequate UCSC main campus facilities. UCSC leases space at various locations in the west side on Swift and Mission Streets. Because UCSC employees who would be relocated to the TI site are already traveling to the west side or the main campus from their respective homes, their relocating to the TI site would not cause a net increase in traffic, but rather a shift that would affect intersections near the TI site. These intersections are not congested under current and future conditions. For these reasons, the acquisition and occupancy of the TI site as currently envisioned would not increase the severity of traffic impacts analyzed in the CLRDP Draft EIR.

ORG-3-36: There are several reasons that shuttle use is limited at this time. First, the number of people who have reason to travel between the Marine Science Campus and the UCSC Main Campus is limited. Most of those who travel to the Marine Science Campus are visitors to the Seymour Center who are not associated with UCSC. Second, shuttle service has been designed to provide student access to classes held at the Marine Science Campus, and the schedule is adjusted accordingly each quarter. This schedule does not adequately accommodate staff travel. In addition, there are still relatively few classes taught at the Marine Science Campus that could potentially include students from the main campus. Further, many of those students are upper-division students who may live off campus and travel to the Marine Science Campus from home. Finally, parking at the Marine Science Campus is still relatively abundant and there is no parking fee. This would certainly change as the population increases at the Marine Science Campus and

the transportation management plan described in the CLRDP is implemented. The transportation management plan includes limiting parking and parking fees in addition to an increase in alternatives to the single-occupant car.

ORG-3-37: Please see the response to comment ORG-3-36.

ORG-3-38: The analysis in the Draft EIR assumes that some residents of the proposed housing units at the Marine Science Campus will travel to and from the main campus. The assumption that the majority of people living in the units will make one round-trip per day to the main campus is not reasonable since the proportion of trips to and from the main campus generated by UCSC faculty, staff and students at the Long Marine Lab (LML) at the present time represents less than 5 percent of the total LML trips.

Even if it was assumed that 75 percent of the persons living in the housing unit made one round trip per day to the main campus, this scenario would result in fewer than 10 peak hour trips added to Western Drive and the Western Drive/High Street intersection. The addition of this traffic would have a negligible effect on traffic operations and would not substantially change any of the impacts in the Draft EIR. Under Existing Plus Long-Term Conditions, the additional traffic may slightly exacerbate projected LOS E operations, but a traffic signal would still not be warranted at this location under this study scenario.

ORG-3-39: The analysis in the Draft EIR assumes that some employees, faculty and students at the Marine Science Campus will travel to and from the main campus via Western Drive. The assumption that the majority of people working on the campus will make one round-trip per day to the main campus is not reasonable since the proportion of trips to and from the main campus generated by UCSC faculty, staff and students at the LML at the present time represents 5 percent of the total LML trips. It is also important to note that some of new population at the project site would be associated with non-UCSC entities (e.g., USGS) and most employees from these facilities would not be making trips to and from the main campus.

Undergraduate students are set of Marine Science Campus population that makes daily trips to the campus. Even if it were assumed 75 percent of the new students at the project site were making one round-trip per day (i.e., single occupant vehicle trip) to the main campus, this would result in fewer than 30 peak hour trips added to the Western Drive and the Western Drive/High Street intersection. The addition of this traffic would have a negligible effect on traffic operations and would not substantially change any of the impacts in the Draft EIR. Under Existing Plus Long-Term Conditions, the additional traffic may slightly exacerbate projected LOS E operations, but a traffic signal would not be warranted at this location under this study scenario. This traffic combined with the fewer than 10 additional trips from the residential units (see response to comment ORG-3-38) would still not cause the signal warrants to be met or change the Draft EIR impact conclusions.

ORG-3-40: See the response to comment ORG-3-26, above.

ORG-3-41: There has not been a significant expansion in wetlands in a period of a few years. Differences in the spatial extent of wetlands between the 2001 and 2003 wetland delineations conducted by the Huffman-Broadway Group (HBG) are the result of additional data collection (i.e., soil moisture observations) and data reinterpretation in accordance with CCC guidelines and staff recommendations. No major changes in wetland vegetation were observed during the study period. For this and other reasons described in HBG's January 12, 2004, letter to Dr. Charles Eadie regarding ESHA analysis and buffer recommendations, the recommended wetland buffers are considered appropriate. The January letter notes the following:

“HBG recommends that 100-foot open space buffers be established to protect wetland ESHAs on the Terrace Point site wherever possible. The primary purpose of these buffers is to preclude development and other disturbance-inducing human activities that would significantly impact wildlife use or otherwise degrade the wetlands. The 100-foot buffer areas will allow sufficient area for the planting of shrubs and construction of berms to provide visual screens in areas where nearby human activity occurs, in the event such features are incorporated in the LRDP. The size of the buffer will allow natural attenuation of stormwater runoff to supplement structural Best Management Practices (BMPs) constructed within developed areas (e.g., grassy swales, detention basins, etc.). If an existing roadway or trail occurs within the buffer, it should be allowed to remain if adequate stormwater treatment can be provided as well as protective measures for wildlife habitat (e.g., visual screening). Construction of additional pedestrian trails should be limited to maintained foot trails constructed no closer than 50 feet from the wetland ESHAs and designed to direct stormwater runoff away from the edge of the wetland ESHAs. Pedestrian trails also should include adequate visual screening for wildlife such as berms and shrub plantings. It is believed these buffers will protect wetland ESHAs from adverse impacts resulting from development on Terrace Point and allow for the implementation of mitigation measures to minimize effects. It should be noted that no buffers are proposed for W7 due to its small size, isolation, and other factors that support its not being designated as ESHA (see above).”

The buffers proposed in the CLRDP are adequately protective of Terrace Point wetland functions and values.

ORG-3-42: The HBG report notes that significant rainfall occurred prior to the first TPAN observation (2.56 inches of rain occurred between January 1 and 3, 2002 in the 7-day period prior to the first Terrace Point Action Network [TPAN] observation). HBG believes that observations made by TPAN should have been made at a time when the soils had drained to a point in time that provided a better representation of normal field conditions as was found in the subsequent months of February, March and April. Furthermore the approach taken by TPAN to make their observations is technically flawed, whereby, the open pit observation technique employed by TPAN yielded false positive information given the nature of the sandy loam soils that drain horizontally and vertically (see comment regarding problems with soil pit observations discussed below).

ORG-3-43: The station used to determine the precipitation curves for this project is an official station used by NOAA, Western Regional Climate Center, and California research stations. The station is the closest NOAA station to the site. In addition, the station has an extended historical

record, which was used to calculate precipitation event frequencies. The UCSC rainfall station is not a NOAA rainfall station. Therefore data acquisition and documentation is not subjected to the same quality assurance and control procedures. Discussions with Rob Franks of UCSC indicate that there is missing data as well as nonsensical data in the record. The NOAA station provides the best available data. Using this information it was determined that the ponding that was observed occurred during above normal rainfall conditions, and as per Corps methodology was discounted.

ORG-3-44: No fraction of wet observations needs to be reclassified as saturated.

ORG-3-45: No fraction of wet and very wet observations needs to be reclassified as saturated.

ORG-3-46: These areas were not classified as wetlands. The sites lack ponding and/or saturated soil conditions from the period of observation of January 30 to April 16, 2002.

ORG-3-47 No reclassification is merited based on reliance on UCSC weather station data for the reasons stated above.

ORG-3-48: No inclusion of data and reclassification to a wetland status is merited based on reliance on UCSC weather station data for the reasons stated above.

ORG-3-49: CCC staff follows Corps and NRCS method for determining normal hydrology conditions. The CCC defines normal the same as the Corps and NRCS. Normal is considered to be events which are expected to occur at a frequency of 51 out of 100 years (see glossary, Corps 1987 Manual).²²

ORG-3-50: Representative sites with blocked drainage were observed during the period from January 30 and April 24, 2004 at either at a 7-day interval or a shorter more conservative number of days (4 to 5) following major rain events. If found to be moist or wet within the major portion of the root zone these areas were excluded from consideration as being saturated to the point that hydric soil conditions could occur.

ORG-3-51: It is not accurate that the only valid ponding observations were made in January 2002. All observations produced data. However, the observations referred to occurred during an excessive site drainage period immediately following significantly above-normal rainfall events.

ORG-3-52: This was done within representative sites with blocked and unblocked surface and subsurface (upper 12 inches) drainage during the period from January 30 and April 24, 2004 at either at a 7 day interval or a shorter more conservative number of days (4 to 5) following major rain events. If found to be moist or wet within the major portion of the root zone these areas were excluded from consideration as being saturated to the point that hydric soil conditions could occur.

²² U.S. Army Corps of Engineers (Corps). 1987. *Corps of Engineers Wetlands Delineation Manual*. Wetlands Research Program Technical Report Y-87-1. U.S. Army Corps of Engineers, Waterways Experiment Station, Environmental Laboratory. Vicksburg, MS.

ORG-3-53: Areas were included if they were found to be ponded and/or saturated during the period from January 30 to April 24, 2004 at either at a 7-day interval or a shorter more conservative number of days (4 to 5) following major rain events.

ORG-3-54: HBG followed CCC staff guidance that provides that strong evidence (direct observation) of upland hydrology (i.e., absence of wetland hydrology) was necessary in situations where a preponderance of wetland vegetation (OBL and/or FACW) occurred. Also see response to ORG-3-55.

ORG-3-55: If saturation occurred in the 30 days following significantly above-normal rainfall conditions, it was not considered. The site was allowed to drain as much as possible in order to obtain data that was more representative of normal conditions. Only saturation that occurred during subsequent peak rainfall events was considered valid. It was found during field observations that rainfall events equal to or greater than 0.49 inches produced ponding at site locations with blocked or partially blocked surface and near surface (upper 12 inches) drainage such as the low-lying areas associated with wetland W2. These areas were mapped as wetlands.

ORG-3-56: Attachment 15 shows that rainfall was not significantly greater than normal.

ORG-3-57: This statement was made in error by HBG. The wording “after 1/30/2002” is changed to “30 days prior to 1/30/2002” in the wetlands report.

ORG-3-58: Field observations made during 2002 were made based on the presence or absence of visual indicators of wetlands hydrology subsequent to the 2001-2002 rainy season. Field data consisting of direct observations of ponding and soil saturation made during 2003 indicated that a rainfall event of at least 0.49 inches was sufficient to cause ponding and saturated soil conditions within the sandy loam soils on site where blocked surface or near surface (upper 12 inches) within low-lying areas such as those found within wetland W2. Such areas were found to typically lack visual indicators of ponding and/or saturation when field observations were made during the dry season.

ORG-3-59: This area was not mapped on the final 2003 wetland map given that field data collected during the 2002 rainy season provided strong evidence that wetland hydrology and soil criteria were not met with significantly greater than normal rainfall occurring after January 30, 2002. Furthermore examination of the Phase III data sheets in the HBG report (Attachment 11b and Attachment 13b) indicates that an error was made in determining that a preponderance of wetland vegetation occurs at the site. This is incorrect; wetland species do not dominate the site.

ORG-3-60: Site 35 was ultimately determined to be a wetland in 2003 based on its location within a historic agricultural ditch immediately adjacent to the margin of seasonally ponded wetland W5. Soil auger test revealed flow from the pond traveled laterally into the soil pit dug with the soil auger on January 31, 2003. Site 39 was determined not to be a wetland for the reasons stated in response to comment ORG-3-59. Site 46 was found to be ponded on January 31, 2003, and located on the margin of wetland W5.

ORG-3-61: See response to comment ORG-3-60.

ORG-3-62: Unlike sites 35 and 46, site 39 lacked evidence of ponding and/or connectivity to a large water source (surface or subsurface) and only 2003 data indicated the presence of very wet soil conditions within the major portion of the root zone (also see response to comment ORG-3-59). Given previous results and soil holes dug in adjacent area, this finding appeared questionable. Furthermore, as explained in other responses, the very wet category was found not to be representative of saturated soil conditions above the 90 percent level which cause hydric soil conditions to occur. In addition, no evidence of ponding or saturated soil conditions was found in 2002.

ORG-3-63: Site 59 was not found to be ponded or saturated (sufficiently to bring about hydric soil conditions) within a major portion of the root zone. Data provided by TPAN was discounted as it was taken following significantly above-normal periods of rainfall during the month of December 2001 and early January 2002. Furthermore, the soil pit analysis employed by TPAN was flawed and yielded false positive results, as indicated by HBG soil moisture data taken in adjacent areas.

ORG-3-64: See response to comment ORG-3-63.

ORG-3-65: The statement citing rainfall amounts on January 7 and 8, 2002, is in error in the HBG report. It refers to the significant levels of precipitation that occurred during December 2001 and during early January 2002 and therefore should read 1/1-3/2002 instead of 1/7-8/2002. Total rainfall during January 1-3, 2002 was 2.56 inches at NOAA Station 047916. HBG used the NOAA station for the reasons stated in response to comment ORG-3-43.

ORG-3-66: NOAA rainfall data indicates that significant above normal rainfall events occurred during December 2001 and early January 2002 before soil pits were dug by TPAN. There is evidence from soil moisture data taken for the various sites during 2002 and 2003 that stormwater entering the terrace point site is moving through the soil in both a horizontal and vertical fashion, with the horizontal movement being faster given the sandy loam soil drainage characteristics. This was also evidenced when holes were augured and water entered the soil pit laterally at different depths. The objective in digging a soil pit is to determine the presence of high groundwater levels that either occur seasonally or are more or less permanent. This only works effectively if there are homogeneous groundwater levels. However, at Terrace Point there is no seasonally high groundwater except in areas where surface or near surface drainage is partially or completely blocked. HBG field data demonstrate that water is flowing through the system at a relatively rapid rate and variable levels of wetness can be found in the soil column through time subsequent to major rainfall events.

In a system like that at Terrace Point, the results of digging a soil pit are that the pit fills with water as various soil layers within the excavated soil profile are exposed and water discharges into the pit. This results in creating a false positive observation/result if one is looking for either ponding or saturated soil evidence. The same is true for localized surface water as it will also run into the pit. Fines also collect in the bottom of the pit which tends to slow the downward flow of

water and ponding results after rainfall events have occurred, but surrounding soils are not saturated creating a false positive result if one is looking for either ponding or saturated soil evidence. Considerable evidence of this situation is provided in the data collected when comparing the HBG data to the TPAN soil pit observations. This same condition occurs where tire ruts and furrows are located. Based on the above, observations using soil pits were discounted by HBG as being a source of reliable data.

ORG-3-67: HBG maintains that the soil pit analysis was conducted following significant above-normal rainfall events and that water running into the soil pit is the result of these events. As stated in response to comment ORG-3-65, 2.56 inches of precipitation occurred several days before the soil pit observations occurred. Furthermore, even if this was not the case, the soil pit approach taken by TPAN will frequently yield false positive results given the porous nature of the sandy loam soils where the pits were excavated and the differential horizontal and vertical drainage that was occurring as a result of the preceding rainfall events (also see response to comment ORG-3-66).

ORG-3-68: The site had not drained for a sufficiently long period after a significantly above normal rainfall period to allow for data to be collected and evaluated. HBG used the CCC's determination of normal rainfall conditions. The CCC defines normal in the same manner as the Corps and NRCS. Significantly above normal rainfall was considered by HBG to be a rainfall event that was 20 percent greater than normal. In order to meet the wetlands hydrology criterion, continuous ponding and/or soil saturation needed to occur for 18 continuous days under normal rainfall conditions. Moreover, as indicated above, the methodology used by TPAN was technically flawed (see response to comment ORG-3-67).

ORG-3-69: This statement is based on field observation.

ORG-3-70: TPAN's photographs show ponding around soil pits, and there is little doubt that ponding occurred in localized areas given the significant above-normal rainfall events that proceed this observation period. However, the site had not drained for a long enough period after a significantly above-normal rainfall period to allow for data to be collected and evaluated so as to be able to discount the effects on soil moisture content from previous significantly above normal rainfall events. In addition, as stated earlier, observations of ponding associated with soil pits is questionable (see response to comment ORG-3-33).

ORG-3-71: This statement is based on field observation.

ORG-3-72: See response to comment ORG-3-70 with respect to sampling point 58. That explanation is also true for sampling point 59.

ORG-3-73: See response to comment ORG-3-72, above. In addition, as stated earlier, observations of ponding associated with soil pits is questionable (see response to comment ORG-3-66). HBG Phase II or Phase III sampling data do not show saturation in a major portion of the root zone as the commenter indicates.

ORG-3-74: Sample point 44 was not deemed a wetland for the same reasons as provided above for sample point 58.

ORG-3-75: Sample point 64 was not deemed a wetland for the same reasons as provided above for sample point 58.

ORG-3-76: An observation of ponding associated with soil pits is questionable (see response to comment ORG-3-66). Furthermore, the site had not drained for a sufficiently long period after a significantly above-normal rainfall period to allow for data to be collected and evaluated, discounting that there would be no or an insignificant effect from the previous significantly above normal rainfall events given the nature of the blocked surface and subsurface drainage on the site.

ORG-3-77: The decision was primarily based on concerns regarding unreliable soil pit data being relied upon by TPAN (see comment ORG-3-66). The sites had similar soil and vegetation characteristics so it was technically reasonable to conclude that the areas were not wetlands. As stated in response to comment ORG-3-66, HBG has found the methodology used by TPAN to determine the presence of wetland hydrology conditions to be flawed.

ORG-3-78: See response to comment ORG-3-77.

ORG-3-79: HBG finds no discrepancy in the information it has presented. The TPAN data presented by the commenter is not accurate and relies on questionable rainfall data from a non-NOAA weather station. The parties who managed the collection of that data have indicated that it consists of records that have missing and nonsensical data due to the lack of an established quality assurance and control program. Moreover, the TPAN soil pit observations that it relies upon are yielding false positive results, due to their construction characteristics and lack of consideration of the non-uniform differential lateral and vertical drainage characteristics of the sandy loam soils at the site.



Watershed Systems

Hydrology - Geology - Soil Science

UCSC

MAR 11 2004

Campus & Community

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March 8, 2004

Dr. Charles Eadie
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Santa Cruz, CA 95060

Re: Terrace Point Draft EIR

To Whom It May Concern:

I submit the following comments on the University of California's Terrace Point Draft Environmental Impact Report and the accompanying Huffman Broadway Group's wetland delineation for Terrace Point. As a professional wetland delineation specialist who 1st mapped both the soils and depths to bedrock at what is now called Terrace Point in 1961 and as a later professor at UCSC, I have conducted and taught field soil mapping at this site for over 40 years. I am currently emeritus and Research Professor at UCSC under contract to the State Water Resources Control Board for wetland and water quality evaluations. I also serve as Research Director of the CSU system Watershed Institute and serve on the Central California Coastal CRAM¹ team. Overall, I find the analysis of impacts on Younger Lagoon Reserve's watershed and the wetlands delineation to be flawed in serious ways, requiring further analysis, and design modification of the proposed project. The four main areas of concern are ones that I have raised throughout our conversations with the University and its contractors during this lengthy process: 1) in order to preserve the integrity of the sensitive coastal wetlands habitats at Terrace Point and Younger Lagoon Reserve, there is need for a complete hydrological model that incorporates and integrates both surface and subsurface flow; 2) during the course of the Terrace Point development, contractors may have impacted the wetland hydrology of the site; 3) the wetland delineation relied on a soil saturation analysis methodology that is flawed; 4) the reports overlook valuable analyses that test for soil redox potential.

On the first point, I note that coastal wetlands receive strong protection because of the high degree of historic impact that has already severely reduced their extent. These wetlands are very productive, provide important ecosystem services, and are critical habitat for wildlife. The wet meadows at Terrace Point form a critical portion of Younger Lagoon Reserve's watershed as well as draining directly into the Monterey Bay Marine Sanctuary. Younger Lagoon Reserve is habitat to a wide variety of wildlife, including legally protected bird and fish species. The environmental review documents present a limited surface water model and propose a system of shallow ponds to mitigate storm water runoff up to 25-year events. This simplified approach ignores

¹ California Rapid Assessment Method for Wetlands

several important factors that are basic and fundamental for maintaining the integrity of the most sensitive habitats that surround the site (lagoon and sea cliffs). First, as the document points out, there is substantial slow, lateral movement of water through the soil and terrace deposits. This groundwater has historically fed several perennial seeps on the eastern slopes of Younger Lagoon Reserve and along the ocean bluffs. It is not clear that the proposed surface water mitigations mitigate for groundwater quantity and flow impacts. The wetlands on the Terrace Point property are not isolated entities, but exist because water is supplied from precipitation, runoff, soil water, and groundwater creating above and below ground flow across a much broader portion of the site than those where the wetlands themselves have been evaluated (see dEIR Fig 4.8-2). I have repeatedly suggested informing decisions for the proposed development with a full water balance model that analyzes both above and below ground flow, as well as evaporation and evapotranspiration in order to maintain the historic hydrology upon which sensitive habitats depend. The dEIR contains serious errors of fact that derive from the absence of a basic water balance model².

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Second, damage to the site's hydrology has already occurred as a result of construction activities at the site. Engineered fill has been used during construction of the NOAA/NMFS building at Terrace Point. This would be expected to have affected the subsurface flow of water from the terrace to Younger Lagoon and possibly to the ocean. Also, a buried utility pipeline was installed across a large portion of the site. That construction opened zones of lower permeability to both the drain-rock that surrounds the pipeline and to higher permeability sandy basal geologic units that lay on top of the deeper Santa Cruz Mudstone. This has a high potential for draining portions of Terrace Point's historic wetlands. The impacts of these activities were not analyzed during previous planning documents, but should be considered and mitigated as part of any future permitting of development at the site. These impacts should also be considered when delineating wetlands at the site.

2

A third point is that several errors are evident in the wetland delineation. Huffman Broadway Group (HBG) relies primarily upon soil moisture classification for their wetland delineation, but their methodology is flawed. First, the proposed duration of saturation supposes a 365 day growing season, which is actually considerably shorter in the summer drought-prone, Mediterranean climate of California. Summer drought without irrigation creates an 8-month growing season. Saturation for 5% of the consecutive days as required by the regulation equates to 12 days, not 18 days as presumed by Huffman for a 365-day growing season. Moreover, the criteria consultants used to classify soils as wet suggest that this category included only saturated soils. The "sheen" to which HBG refers as a qualifier for wet soils is typically used as an indicator for saturated soils. In an effort to confirm their classification system, HBG chose a subset of soils with which to quantify soil moisture during the Phase III delineation. Unfortunately, the data resulting from these tests are difficult or impossible to statistically analyze because of unequal or insufficient sample size. In an attempt to justify an analysis that does not use the typical three elements of soils, vegetation, and hydrology, HBG discounts soil chroma because these very old well-developed soils almost all have dark surface horizons. There is no underlying geologic reason for the

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² By not understanding or evaluating groundwater/surface water interactions within the old clay-rich portions of the deep soil units, inconsistent and confusing ideas about absence of perched water tables and criteria for soil saturation that seasonally restricts oxygen in plant roots are presented by HBG.

dark soils except high organic matter. Parent materials are beach sand. Then, vegetation indicators were most often ignored because so much of the vegetation is indicative of wet conditions. They thus tried to rely upon soil hydrology as the primary control for wetland delineation. But then they did not demonstrate a clear criterion for soil hydrology. The methods they tried to use to differentiate wet soils into "saturated", very wet, wet, and less wet were not established with any rigor and have no physiologic or pedologic bases. If it's wet, it's wet. You do not have to be able to squeeze water out of the soil. You cannot put it in a bag and take it back to the lab where you transfer it to a soil can and dry it out to establish its original physiologic wetness (does it impair oxygen transfer to plant roots?). And, above all, you cannot sample at irregular intervals of greater than 12 or 18 days and determine what the conditions may have been between sampling intervals.

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In its justification for relying primarily on soil moisture classification for its wetland delineation, HBG describes its reasons for rejecting both classification of hydrophytic vegetation and hydric soils. There are, however, no statistical analyses of correlations between their soils moisture data and these other two parameters that are normally required for wetland delineation. The percent by weight or volume of water content in a silty-clay may need to be substantially less than that in a sand to restrict plant growth to those species physiologically adapted to low oxygen levels. By trying to reject vegetative indicators in favor of only hydrology, HBG got out on a limb with no defensible basis for their assessments.

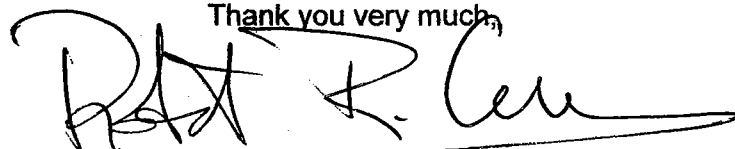
6

Vegetation data for the Phase II delineation as presented in the dEIR are not dated. That is a basic requirement. Further, they appear to have missed one short-lived dominant and important ephemeral wetland indicator at the site, Bermuda buttercup (*Oxalis pes-caprae*). That plant grows quickly in as little as six weeks in about March and dies back. This plant is seen today where they do not report it, so they may have sampled too late in the year. Moreover, in order to reject hydrophytic vegetation as an indicator of wetlands, HBG asserts that a number of species are not "acting as hydrophytes." Five listed indicator species were rejected on this dubious basis alone. Certainly we have all seen plants that do not act as they are classified, but to reject such a major portion of the indicator plants would require rigorous widespread data or detailed local proof. Neither are supplied. I have suggested that HBG use chemical (oxy-redox potential measured in-situ) or other methodologies to test directly for soils that function as hydric soils, and I maintain that these tests would aid greatly in determining the extent of wetlands at the site.

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In summary, it is my opinion that wetlands at the Terrace Point site have a much broader extent and require a higher degree of protection than is afforded by the present environmental documents. I suggest that the University employ some of the methods suggested above to amend their wetland delineation and proposed project. There are adequate non-wetland sites for all needed coastal-dependant facilities at Terrace Point.

Thank you very much,



Robert R. Curry- Registered Geologist and Hydrologist

COMMENT LETTER I-1: ROBERT R. CURRY

I-1-1: The University disagrees with the commenter's assertion that the Draft EIR contains serious errors of fact resulting from the absence of a water balance model and notes that the commenter does not present any evidence in support of this statement. The commenter is referred to Section 4.8 in the Draft EIR, which describes measures included in the CLRDP to minimize impacts on groundwater quantity and flows so that YLR and ocean bluff seeps are not adversely affected. With respect to onsite wetlands, based on soil saturation observations, HBG has concluded that onsite wetlands are sustained by surface and near-surface flows (less than 12 inches below ground surface), and not by groundwater. With respect to Footnote 2 regarding perched water tables and soil saturation criteria, based on soil moisture observations presented in HBG's January 2004 report, which showed moist or wet soil layers beneath saturated soil layers, HBG does not believe Terrace Point supports perched water tables of the nature alluded to. Soil saturation criteria used in the report are in accordance with U.S. Army Corps of Engineers (ACOE) and California Coastal Commission (CCC) wetland delineation guidelines and the scientific literature, which requires assessment of hydrology within the major portion of the root zone. Also see response to comment ORG-2-6.

I-1-2: An analysis of whether previously permitted construction activities have affected Terrace Point drainage patterns and the resulting extent and distribution of wetlands was not addressed by the HBG study because consideration of these factors is not germane to the current wetland delineation. In accordance with ACOE and CCC wetland delineation guidelines, HBG's January 2004 report focuses on existing conditions on Terrace Point (not past or hypothetical conditions). None of the data collected in conjunction with HBG's January 2004 report suggest that previously permitted construction activities have affected Terrace Point drainage patterns and the resulting extent and distribution of wetlands.

I-1-3: The 1987 ACOE wetland delineation manual defines the growing season as follows: "The portion of the year when soil temperatures at 19.7 inches below the soil surface are higher than biologic zero (5° C). For ease of determination this period can be approximated by the number of frost-free days." HBG's treatment of the growing season as year-round and estimation of 5 percent of the growing season as 18 days are consistent with this definition.

The 1987 ACOE wetland delineation manual does not identify soil sheen as an indicator of wetland hydrology or hydric soil conditions. In the laboratory analysis described on page 20 of HBG's January 2004 report, most soils observed to exhibit a sheen on the surface of the ped in the field fell within the "wet" and "very wet" categories, but were not found to be saturated (i.e., they had less than 90 percent soil saturation) during quantitative soil moisture analysis. For these reasons, HBG does not believe soil sheen is a good indicator of soil saturation. Also see response to comment ORG-2-48.

I-1-4: As described on page 12 of HBG's January 2004 report, soils on the property developed under crop cover or grasslands and consequently have organic-rich, dark brown surface layers with low chroma values, which inhibit the use of soil color as an indicator of hydric soils conditions and may mask the presence of redoximorphic features. For these reasons, HBG

did not rely exclusively on soil chroma and redoximorphic features to identify the presence of hydric soils.

I-1-5: Vegetation indicators were not ignored in conducting the wetland delineation. As described on page 14 of HBG's January 2004 report, a preponderance of dominant plant species with obligate (OBL), facultative wetland (FACW), and facultative (FAC) designations was considered presumptive evidence of wetland conditions only to be rebutted if hydrologic and soil moisture monitoring produced strong evidence of upland hydrologic conditions (i.e., absence of wetland hydrology). HBG disagrees with commenter's assertions that (i) the soil moisture methodology was not established with any rigor, and (ii) the methodology has no physiologic or pedologic basis. The methodology was based on observable physical characteristics that distinguish soils with varying moisture content, which laboratory analysis following accepted soil analysis methodology (see the responses to comments ORG-2-21 and -22) subsequently confirmed to be valid.

HBG further disagrees with the commenter's assertion that one cannot predict what conditions may have been present between sampling intervals. The purpose of HBG's hydrologic monitoring was to identify locations with flooding, ponding, and soil saturation within the major portion of the root zone for long durations (greater than 7 continuous days) following normal rainfall conditions. For this reason, HBG targeted periods 7 days after normal rainfall events to conduct hydrologic monitoring. The month of January was not used in the analysis due to extreme rainfall events that occurred either in the preceding and/or during the month of January 2002 and 2003. Sampling was also not conducted during periods in which there were extended weeks of low or no rainfall. HBG sampled within representative time frames following major precipitation events. This was done within representative sites with blocked and unblocked surface and near-surface (upper 12 inches) drainage during the period from January 30 and April 24, 2004 at either at a 7-day interval or a shorter more conservative number of days (4 to 5) following major rain events. If found to be moist or wet within the major portion of the root zone, these areas were excluded from consideration as being saturated to the point that hydric soil conditions could occur.

Given the drainage characteristics of the sandy loam soils at the site, wetlands were only found to be present where there was blocked surface or near surface drainage. Data collected in 2003 result in similar findings to those in 2002. The data also showed, based on variable moisture levels within the various soil profiles examined, that storm water following major storm events moved laterally through the sloping soils at a fairly rapid rate unless drainage was blocked. This was evident in that the soils did not fill with water and pond for extended periods unless drainage was blocked. Not surprisingly, a preponderance of wetland vegetation (OBL and FACW) was found within these areas where ponding and/or saturated soils (VW to S "field descriptors") occurred.

I-1-6: Both factors, hydrophytic vegetation and hydric soils, were considered in the wetland delineation. Statistical analyses of correlation among hydrology, soils, and vegetation data are normally not required for wetland delineation. Neither CCC nor ACOE wetland delineation methodologies require the use of statistical analysis. HBG agrees with the commenter's

observation that water content in a silty-clay soil may be less than in a sandy soil to restrict plant growth to those species that are physiologically adapted to low oxygen levels. HBG's soil saturation determinations were adjusted to account for soil textures present on Terrace Point. Soils were found to be primarily sandy loams where there was variation in soil moisture conditions. Underlying silty clay and sandy clay layers were typically found not to be saturated. Also see the response (last three sentences) to comment ORG-2-44.

I-1-7: The dates when vegetation data were collected during Phase II delineation were inadvertently omitted from the report. Vegetation data with specific dates was presented in HBG's July 2002 report (field data sheets) and in the Draft December 2003 report. The report explains that plant cover was estimated at various site locations between September 2001 and April 2002. Plant cover was also determined for sites sampled in January and February 2003.

Please note that the ephemeral wetland indicator species, *Oxalis pes caprae*, was not missed during the site surveys. As indicated in Attachments 11a and 11b of HBG's January 2004 report, *Oxalis pes caprae* was observed at several sampling locations (e.g., 17c, 25-29, 31, 35b, 50, 60, 64, 71). Furthermore, sufficient data were provided in support of HBG's determination that a number of NWI-listed wetland indicator species are not acting as hydrophytes on Terrace Point. This determination only was made where the soil moisture analysis and other data collected provided strong evidence of upland hydrology conditions.

I-1-8: There are two methods frequently used to assess the reduced nature of the soil, a color metric test using a chemical for detecting ferrous iron (indicative of soil anaerobic condition), and measuring redox potential with platinum probes. Both tests have significant problems that may affect the readings.²³ For this reason these techniques were not employed.

²³ Tiner, Ralph W. 1999. Wetland Indicators. A Guide to Wetlands Identification, Delineation, Classification and Mapping. Lewis Publishers.

Draft EIR
 Proposed Marine Science Campus CLRDP
 February 19, 2004 Public Hearing
 Comment Form

Name: Edward Davidson

- | | |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---|
| 1- Traffic impacts → possible cumulative impacts with Lowe's/Home Depot proposals. Trip assignment | 1 |
| Higher % of traffic generated @ Mission/Chesnut than Mission Bay? | 2 |
| What about Eastern Access. | 3 |
| 2- Ag buffer fence & shrub/tree row property line north of access road bend. Solid fence would allow dust (nuisance) above with 18" animal access below. | 4 |
| A living fence (chain link with vines) would suffice. Shadow pattern irrelevant | 4 |
| 3- Geology map (Fig. 6-D) should also include County map with precise location of San Lorenzo Fault. | 5 |
| 4- Wetlands W-4 and W-6 are shown as barren - these are not wetlands per N.C. or Coastal Act definitions. Plans call for filters at drop inlet (F-4) but ignores the plugged culvert at De Anza MHP which created ponding. | 6 |
| 5- Question "special status" of Northern Harrier, Red legged hog, Scooby plow | 7 |
| | 8 |

Please leave your comment form(s) at one of the information tables at tonight's meeting, or mail to EAG, 515 Swift Street, Santa Cruz, CA 95060

* on-site housing and trips to campus ^{main} should not be assigned to

COMMENT LETTER I-2: EDWARD DAVIDSON

I-2-1: See the response to comment LA-2-1.

I-2-2: The comment is unclear.

I-2-3: The proposed project is the CLRDP for the Marine Science Campus (MSC), which primarily generates traffic to and from the southwest area of the City of Santa Cruz. The proposed eastern access to the UCSC main campus would not have a substantial effect on the travel patterns of Marine Science Campus traffic and therefore was not addressed in this study. While the eastern access would provide some benefit to traffic circulation in the study area, this area-wide improvement has associated potential secondary environmental impacts that do not make it a feasible mitigation measure for this project.

I-2-4: The comment appears to refer to General Mitigation Measure 4.2-1 on page 4.2-15 of the Draft EIR, which states that UCSC will install a four-foot-high landscaped fence along the Younger Ranch property line that will extend from the bend in the existing access road northward along the property line. To allow wildlife passage, the fence will have a uniform gap of 16 inches between a smooth wire defining the bottom of the fence and the ground.

The commenter states that “a living fence (chain link with vines) would suffice.” Mitigation Measure 4.2-1 does not rule out the option of a living fence along the lines that the commenter suggests. See also response to comment I-3-1.

I-2-5: The Ben Lomond fault location shown on Figure 4.6-1 is based on the Fault Activity Map of California and Adjacent Areas compiled by Charles W. Jennings, 1994. The location of the Ben Lomond fault as mapped on the Geologic Map of Santa Cruz County, California (U.S. Geological Survey, Map I-1905), compiled by Earl Brabb in 1989, shows the southern end of the Ben Lomond fault approximately 1 mile to the west of the location on the Jennings map. Brabb (1989) mapped the southern end of the Ben Lomond fault as queried and is uncertain of its location through the City of Santa Cruz. Because the Ben Lomond fault is not considered active and is too old to be considered a potentially active feature (Draft EIR, page 4.6-11), its location as shown on Figure 4.6-1 will suffice for the purposes of the seismicity discussion in the Draft EIR.

I-2-6: Based on the analysis of hydrology, soils, and vegetation data presented in HBG’s January 2004 report, HBG determined that W4 and W6 are wetlands per U.S. Army Corps of Engineers and California Coastal Commission wetland definitions and delineation criteria.

I-2-7: The plugged culvert referred to in this comment is addressed in the Draft EIR (page 4.8-29). The Draft EIR states that the drainage pipe to DeAnza Santa Cruz residential community would be repaired as part of stormwater system improvements that the University would complete independent of specific development actions. Please note that the fact that the culvert is plugged does not affect the validity of installing a filter at the local drop inlet for water quality protection purposes.

I-2-8: The commenter appears to question the “Special Status” of red-legged frog, snowy plover, and northern harrier. The U.S. Fish and Wildlife Service (USFWS) and California Department of Fish and Game (CDFG) share regulatory responsibility for the protection of biological resources, maintaining records on their abundance and distribution, and making the designation that reflects the appropriate level of agency concern. Special-status species are species that are provided varying degrees of legal protection under both the federal and California Endangered Species Acts (FESA and CESA), and recognition under the National Environmental Policy Act (NEPA) and California Environmental Quality Act (CEQA). The red-legged frog subspecies at the project site and the snowy plover (western coastal population) have been federally listed under FESA for several years. The northern harrier is designated a California *Species of Special Concern* (hence a “special status” species) because CDFG has determined that populations are declining, distribution is increasingly limited, and/or “continuing threats have made them vulnerable to extinction” (see also the responses to comments PH-1-8, PH-1-9, and PH-1-10).

Edward J. Davidson

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September 1, 2002

Comments on the UCSC Marine Science Campus Long Range Development Plan.

For more than a decade, I have witnessed various plans for Terrace Point come and go, usually with fierce opposition from its neighbors to the north and south. I am pleased that the LRDP will accommodate the University's needs for the next twenty years, designed to minimize the neighbors' objections.

As an active participant in the Wells Fargo application process, I am convinced that the concerns of the neighbors and Coastal Commission staff are exaggerated well beyond development impacts the LRDP will produce. My five-page critique of the Coastal staff letter to the Draft EIR for Wells Fargo included the topics to be discussed below. But first some historic context.

When the Regents agreed to establish a UC campus at Santa Cruz in 1959-60, Santa Cruz was still in its post-WWII growth phase. In the early 1960's, the City annexed the Westside Lands for the Westside Industrial Park and residential buffer between the park and the Younger Ranch in the unincorporated area. Medium-density residential use was selected to allow apartments for the industrial workers. Delaware Avenue was designed as an arterial road parallel to Mission Street. It was planned to extend toward the Depot site connecting to either Chestnut or Front Streets. The 1965 General Plan also showed a possible connection, via Beach Hill, to Lower Ocean Street.

The residential zone, which includes the Terrace Point property, had only one residential development since the annexation: the De Anza Mobilehome Park, built in the late 1960's. The park is bordered by Natural Bridges State Beach at the south, ocean bluffs at the west, and Terrace Point at the north. The Long Marine Lab. and other marine-related facilities, mostly recently developed, are on the northern portion of the Terrace Point property.

I am in pretty solid agreement with the policies and land use arrangement of the Draft LRDP, having read the report and appendices and being thoroughly familiar with EIR for the Wells Fargo project. My attendance at the public meetings early in the LRDP process revealed that the issues raised by the De Anza MHP residents, who dominated the meeting, were the same as those that helped derail the Wells Fargo application. That the LRDP accommodates most of these concerns is politically expedient yet, in my opinion, unnecessarily restrictive. I offer the following analysis of issues I anticipate will be raised in future public hearings. They reflect Coastal Act policies as well as city General Plan and environmental

policies.

1. Agricultural Buffer. The 200-foot agricultural buffer established by Santa Cruz County is to allow for pesticide drift. Beyond that distance the hazard would be dissipated. Pesticides are seldom applied on windy days. The nuisance rather than hazard of odor and dust may apply here; the agricultural operator insisted on a 500-foot buffer from residential uses. The Wells Fargo EIR suggested a solid wall to mitigate the wind-blown dust (odor cannot be controlled) however a hedgerow should suffice. Native shrubs would have the advantage of allowing passage of small animals and food sources and roosting for small birds. A compact row set less than 500 feet should control the wind-blown dust nuisance.

2. Wetlands. At least one and possibly three areas designated as "wetlands" do not fall within the Coastal Act's definition of "Environmentally sensitive (habitat) areas". These ESHA's either contain rare plant or animal species or play a valuable role in an ecosystem. According to the Gilchrist and Associates report in the appendix, Wetland W4 is the occasional ponding at a small drainage swale that was placed in a culvert for construction of the De Anza MHP. Constriction of the culvert's outlet causes the ponding at its drop inlet after major rainstorms. The "wetland" plays no special role in an ecosystem and contains no sensitive species. Repair of the culvert would eliminate the ponding altogether.

Wetland W5 is a seasonal pond nearer the bluff than W4 and is a shallow depression with no outlet. While the pond may retain water during much of the rainy season, it plays no special role in an ecosystem nor supports any rare species. Due to its proximity to the bluff, its salinity should be high as a result of salt spray from waves crashing the bluff.

Wetland W3 on the upper terrace was found to have low wildlife habitat value. It shows no significant difference from its adjacent non-wetland area. It retains storm water due to slow percolation and altered surface drainage. Here the wetland designation is questionable but certainly not an ESHA. Note that if the wind-borne dust from the adjoining agricultural operation was as severe as reported, the dust would have settled on the damp soil and reduced its water retention.

3. Coastal Priority Uses. The Coastal Act was amended in 1982 to assure coastal-dependent uses are not precluded by non-priority uses. Santa Barbara County had proposed residential zoning to preclude on-shore support of the offshore oil wells. The Coastal Commission staff's letter to the Wells Fargo EIR inferred that this provision required only coastal-dependent uses in such areas thus housing, a non-priority use, could be eliminated. At Terrace Point, the coastal dependency was considered access to seawater for marine science developments. So not only was Coastal Act Section 30222 misinterpreted, but the availability of vacant industrial parcels in the nearby Westside Industrial Park, which could be served by a sea water pipeline, means the marine facilities are not dependent on the Terrace Point site for their existence.

4. Housing. The Housing Element of the 1993 Santa Cruz General Plan called for 200 residential units on the Terrace Point property. That number was derived

from the City's fair-share of regional housing needs distributed among the undeveloped residentially zoned properties. The Wells Fargo project proposed 190 homes for the property in a combination of apartments and detached ownership units. The De Anza MHP residents voiced their strong objection to housing through the public hearing process. The applicant agreed to a reduction to 150 units, then 100 units. The Planning Commission approved the project with the elimination of all housing on the site. They reasoned that only coastal-priority uses should be allowed. This misinterpreted the Coastal Act Section 30222 policy regarding coastal-dependent uses and inconsistent with the General Plan policy which called for 200 units on the site.

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The LRDP calls for some housing on the site, limited to temporary research staff, with accommodations from detached houses to dormitory-style rooms. Given the expected opposition from the neighbors, I suspect the University selected the minimum number of units to meet its needs over the next two decades. The plan allows future expansion of housing adjacent to the housing site and the possibility of housing at the upper terrace. I think a review in ten years will reveal whether the on-site housing needs are being met. For the current round of hearings, the proposed number of units should not be reduced in the absence of Findings of significant harm to the environment.

5. Blufftop Trail. The City's Trails Master Plan shows a bluff top trail connecting Natural Bridges State Beach with Younger Lagoon connecting to Wilder Ranch State Park in the unincorporated county. This conforms to the policy adopted for the Monterey Bay National Marine Sanctuary. The portion within the De Anza MHP has never been open to the public although its original approval called for pedestrian access through the park. Cliff retreat over the past 35 years would make installation of such a trail an impossibility under the current configuration.

There is a problem for persons from Natural Bridges S. B. who venture upcoast who get cut off by the rising tide. The options for such stranded persons are to risk traversing the cliff base with potential harm to the tide-pool habitat or scampering up Younger Lagoon with possible damage to the sensitive habitat there. While I can see no solution at the current time, I am offering a suggestion for some time in the future, such as the 20-year time frame of the LRDP.

7

Continuing bluff retreat may require relocating the bluff top coaches (bluff protective measures would impact the tide pools). I can visualize a land swap of a bluff top trail for land adjacent to the current boundary wall beginning at the 100-foot bluff setback large enough to accommodate a row of relocated coaches. There is no development proposed for this area in the LRDP.

I wish to repeat my strong support for the proposed plan and will do all I can to help obtain Coastal Commission certification. Excepting the housing issue, which can be revisited if circumstances warrant, the plan accommodates the many conflicting interests and will be a proud addition to the University and the City of Santa Cruz.

Respectfully submitted,



COMMENT LETTER I-3: EDWARD J. DAVIDSON

I-3-1: Comment noted. As indicated in the Draft EIR (page 4.2-14), the CLRDP provides for setbacks of 200 to 500 feet from the boundary of the Younger Ranch, which is in agricultural use. In addition, General Mitigation Measure 4.2-1 on page 4.2-15 of the Draft EIR states that UCSC will install a four-foot-high landscaped fence along the Younger Ranch property line that will extend from the bend in the existing access road northward along the property line. To allow wildlife passage, the fence will have a uniform gap of 16 inches between a smooth wire defining the bottom of the fence and the ground. The fence would not necessarily be solid, and could encompass the hedgerow recommended by the commenter. See also the response to comment I-2-4 above.

I-3-2: The fact that the culvert at the De Anza Santa Cruz residential community is plugged does not affect wetland W4 from being delineated a wetland (i.e., it would be considered a wetland irrespective of whether the culvert is plugged or not) because U.S. Army Corps of Engineers and California Coastal Commission guidelines require wetland delineations to be based on existing site conditions. Furthermore, historical photos indicate wetland W4 was present prior to the construction of the mobile home park. As described in HBG's January 2004 ESHA analysis and buffer recommendations letter-report, W4 does play a special role in the local ecosystem and therefore meets the definition of an Environmentally Sensitive Habitat Area (ESHA). Before the University undertakes repair of the culvert, it would examine the hydrology of W4 and design the pond outlet appropriately so as not to adversely affect the wetlands by eliminating ponding.

I-3-3: As described in HBG's January 2004 ESHA analysis and buffer recommendations letter report, W5 does play a special role in the local ecosystem and therefore meets the definition of an ESHA. The University does not have the data to determine whether the salinity of this wetland is higher due to its proximity to the ocean bluffs.

I-3-4: The commenter takes issue with the designation of wetland W3 as an ESHA. This designation was made in the Draft EIR (page 4.4-46) based on the CCC's general guidance that wetlands be deemed ESHAs unless, as is the case with wetland W7, it does not support special-status species and is already disturbed as a result of human activity. As described in HBG's January 2004 ESHA analysis and buffer recommendations letter-report, HBG believes W3 does play a special role in the local ecosystem and therefore meets the definition of ESHA. The commenter notes that drifting dust from agriculture would have reduced soil water retention at W3. This seems unlikely, since agricultural dust would be derived from the same soil parent material as is already present.

I-3-5: The comment appears to posit that seawater could be piped to other locations, eliminating the need to locate marine research facilities at Terrace Point. However, such a supply line would require the installation of pipelines across public lands of the City and other private lands not controlled by the University. Further, such a line could not feasibly provide the volume or return capacity needed. Added energy consumption and costs would also be involved in piping seawater to a remote location. In relation to prioritization of uses at Terrace Point, the comment references CA Section 30222. However, that section deals only with lands in private ownership,

assigning low priority to private residential development. Neither factor is involved in the proposed CLRDP.

I-3-6: Comment noted. No response is necessary.

I-3-7: The Draft EIR (pages 4.9-16 and 4.9-17) affirms the commenter's statements suggesting that portions of the terrace, including informal trails, overlooks, and McAllister Way, have been used in the past (and currently) by the general public for walking, bicycling, and viewing the ocean, and that surfers have been observed climbing down the bluff face to the beach below. At the DeAnza Santa Cruz residential community there is indeed public access to the beach, and signs that indicate this, including a gate in the fence between DeAnza and the Marine Science Campus near the coastal bluff. However, it would not be possible for a stranded person to scramble up Younger Lagoon to escape the rising tide at the bluff face. Younger Lagoon beach is separated from any pocket beach or intertidal shelf on both sides by vertical cliffs that go directly to water and can only be reached by water. Further, a public access trail that crosses Younger Lagoon would not be advisable from the standpoint of protection of the natural resources there.

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March 19, 2004

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UCSC
MAR 19 2004
Campus & Community Planning

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UCSC ENVIRONMENTAL ASSESSMENT GROUP

By _____

re: comments on UCSC Marine Science Campus CLRDP Environmental Impact Report

Ladies and Gentlemen:

Following please find my comments about the UCSC Marine Science Campus CLRDP Environmental Impact Report. Please respond to each comment in this letter in the FEIR.

The University proposes a "project" for the 98 acre Long Marine Laboratory site at Terrace Point which is a Coastal LRDP (similar to an LCP) that will govern development for the next 20 years on the site; and which also includes some near term development under the LRDP including Phase II of the "Center for Ocean Health Project"; the Sea Otter Research and Conservation Center; a warehouse complex for the storage of boats and marine supplies; and a 42 unit condominium development.

The overall development of the site includes the following 3 potential phases:

1. Currently On Site As Shown By Fig. 3-7 in DEIR
 - *Long Marine Lab buildings
 - *Seymour Center
 - *Younger Building
 - *Support Housing
 - *Marine Mammal Pools
 - *National Marine Fisheries Service Lab "Phase I"
 - *California Dept of Fish and Game Marine Wildlife Center
 - *Storage

2. To Be Constructed Under LRDP

- *Shared Campus Warehouse and Laydown Facility
- *Support Housing for Warehouse
- *Marine Research and Education Buildings
- *Monterey Bay Aquarium Sea Otter Research and Conservation Center
- *42 Units of apartments and condominiums
- *USGS Western Coastal Facility
- *Support Facilities

3. Also Subject To Eventual Development

- *All wetland areas if "wetlands conditions change" (the extent of which appears to depend on which wetlands consultant is hired to follow the University's bidding)
- *"Wildlife corridors" that even now currently provide no meaningful throughway for wildlife
- *All open space that is only temporarily designated as such under the LRDP

The former "Terrace Point" site (the Long Marine Lab buildings plus the property acquired by the University from Wells Fargo Bank) has been characterized historically by piecemeal development and progressive downgrading of the area of wetlands on the site. When Wells Fargo attempted to develop the property during the 90's over the objections of a majority of the citizens of Santa Cruz and was unable to prevail despite a long running battle, it switched tactics to carving up little pieces of the parcel for uses that could not be challenged in the local government process: the NMFS facility that was processed under NEPA; and the Fish and Game facility. Wells Fargo also hired John Gilchrist to persuade the Corps of Engineers to reduce the extent of wetlands on the site.

Wells Fargo finally gave up its development efforts and sold the property to the University. As part of the sale the University promised to use the name "Wells Fargo" in naming the site (an idea since abandoned); and under a secret agreement that the University has refused to disclose despite Public Records Act requests.

Now the University proposes, under the proposed LRDP, to develop the property in the same way previously proposed by Wells Fargo Bank: a mix of commercial buildings; residential development; temporary housing and restaurants, few of which are truly Coastal Dependent, and that could eventually cover the entire site. The University has even adopted a tactic of Wells Fargo hiring the a wetlands consultant to try to reduce the area of wetlands on the site

In addition, an EIR must view a project in connection with the effects of past projects, the effects of other current projects, and the effects of probable future projects.

2a. The DEIR fails to consider the following projects and potential projects:

- Home Depot
- Lowes
- Operations at the former Texas Instruments plant to soon be conducted by the University.
- The adjacent Swenson parcel: the owner of this parcel has stated publicly on several occasions that said he would develop his property as soon as controversy concerning Terrace Point was resolved
- Discussions with the Goode family about the acquisition or development of Younger Ranch
- Other adjacent private property

2b. Since this project has a 20 year time frame, the DEIR must consider the long range and cumulative impacts of each potential impact under CEQA over that period of time which has not been done in the DEIR. This must be done in the FEIR.

3. Also, CEQA requires identification of criteria of significance and thresholds of significance as to each potential impact which has not been sufficiently done in the DEIR, particularly for those CEQA categories in which mitigation measures are not provided. This must be done in the FEIR.

4. Finally CEQA requires an *explanation* of how any mitigation measure will reduce an impact to less than significance which has not been sufficiently explained in the DEIR as to any CEQA categories. This must be done in the FEIR.

5. Because the LRDP is intended to function as a Local Coastal Program³, Coastal Act standards must be considered in the LRDP and the DEIR. ***Therefore it is not enough for the DEIR to merely address CEQA criteria: it must also specifically address all relevant Coastal Act criteria; and even where project effects do not rise to the level of "significant impacts" for effects related to Coastal Act standards, it must discuss, and propose mitigation measures, to comply with Coastal Act standards (particularly since consistency with other environmental standards is a CEQA standard in any event).*** The DEIR has failed to address such issues in a great deal of the report. Significantly, the DEIR fails to address the Coastal Act standard that any conflict between Coastal Act standards must be resolved in a manner which on balance is the most protective of significant coastal resources, Pub R 30200. The DEIR does not demonstrate as to each impact how conflicting Coastal Act standards would be resolved in a manner which on balance is the most protective of significant coastal resources; and should do so.

6. Aesthetics: The current development at Terrace Point is a visual blight that can be seen from miles on either side of the site. The designers of the current buildings have gone out of their way to make the shapes and roof lines prominent and angular. Under the Coastal Act the developer of a property has a duty not only to avoid scenic blight along the coast, but also to restore areas visually degraded by prior piecemeal development. (Pub R 30251). In the case of Terrace Point this might be done by planting trees or providing some other type of screen to hide the hideous architecture that has been placed there. This needs to be addressed in the FEIR and the Coastal Commission should require mitigations for this impact. ***No mitigation measures are provided in the DEIR for aesthetics presumably because the viewshed is considered an insignificant impact which is patently incorrect.***

³ see Notice of Preparation: "A Coastal LRDP is similar to a Local Coastal Program prepared by a local agency, in that once it is approved by the Coastal Commission, the University will be responsible for coastal permitting of future projects...."

7. Aesthetics: Besides remediation of current scenic blight, the project, as conceived in the LRDP, would merely exacerbate the current visual blight by constructing a string of buildings extending almost a mile from a point inland to the very edge of the coast (cf. Pub R 30251). This "skyline" would be visible from great distances from either side of Terrace Point. A reasonable solution would be fewer buildings; more space in between buildings; limiting buildings to 1 story; and even requiring facilities to be partly undergrounded with "green roofs" (that is roofs that have plants and trees growing on them...an increasingly common practice that also saves great amounts of energy). Another way this could be mitigated would be by providing underground parking. (cf. Pub R 30212.5. Parking to mitigate overcrowding or overuse; Pub R 30253 development should provide adequate parking facilities). These questions have not been addressed in the LRDP or the DEIR and must be explored in detail in the FEIR.

8

8. Aesthetics: The project would create a new source of substantial light or glare which would adversely affect nighttime views in the area (cf. Pub R 30251). It does not take a great deal of imagination to visualize the glare that Terrace Point would present motorists approaching Santa Cruz from the North on Highway 1 at night. In addition, this glare would be visible far out on the horizon including at Wilder Ranch and other supposed "natural areas" at night. This ruins not only Terrace Point but a large stretch of coastline. The only way this can be addressed is by less development. In any event, this impact has not been discussed by the LRDP or DEIR and must be fully explored in the FEIR.

9

9. Agricultural Resources: The University should have considered the evidence and testimony produced during the CEQA hearings for the Wells Fargo developments (2 EIRs were processed). These materials are not reflected in the current DEIR and are therefore incorporated by reference in these comments. These materials proved beyond doubt that the entire Terrace Point site was comprised of prime agricultural soil. This has not changed. Besides the few buildings that have been constructed in the meantime to try to degrade the agricultural potential of the site, small scale organic agriculture would still be feasible at Terrace Point. No consideration has been given to this in the LRDP or DEIR and must be fully explored, considering the material in the Wells Fargo FEIRs, as part of the FEIR for this project.. This project would convert prime agricultural soils and other lands suitable for agricultural use to nonagricultural uses in violation of the Coastal Act (Pub R 30242) .

10

10. Agricultural Resources: The project threatens the existence and productivity of adjacent agricultural land by failing to establish stable boundaries between urban and rural areas including clearly defined buffer areas (cf. Pub R 30241, Pub R 30242). The only "stable boundary" apparently provided is a fence and some plantings between the project and the adjacent Younger Ranch agricultural uses. There are no other measures or mitigations provided to insure that the development at Terrace Point does not induce growth to the North. A possible mitigation of this type would be a prohibition against the University or any University serving development being placed anywhere to the North in Santa Cruz County from the current City of Santa Cruz city limits; and to require the University to obtain restrictive zoning changes from the County for this purpose prior to undertaking any construction on the site. Another mitigation would be to place a secure fence, with the exception of a wildlife corridor, along the Northern edge of the project to protect against trespass. Another mitigation measure would be for the University to provide waivers and hold harmless guarantees from the University and all persons working at the project site to nearby agricultural operations for adverse effects from any airborne odors or contaminants caused by agricultural operations in view of the consistent 20MPH+ winds that blow from the North toward Terrace Point on a daily basis.

11

11. Agricultural Resources: No "economic feasibility evaluation" has been conducted to evaluate the effect of the project on agricultural lands on site and adjacent/nearby (Pub R 30241.5). The Coastal Act requires a economic feasibility study to be provided whenever a project potentially interferes with agricultural operations either on site or off site. This has not been done and should be done as part of the FEIR as to the site and all adjacent agricultural parcels.

12

12a. Biological Resources: The project would have a substantial adverse effect on any species identified as candidate, sensitive, or special status species which is inaccurately and inadequately discussed in the DEIR for the following issues and must be further discussed in the FEIR:

- Possible ESHAs which exist on or near Terrace Point
- Red legged frog
- Burrowing owl
- Kite
- Harrier
- Peregrine falcon

13

12b. In addition, all mitigations focused on these species are limited to mitigation measures to be used DURING CONSTRUCTION and do not address the issue of LOSS OF HABITAT or MIGRATORY ROUTES for these species which is significant (see Pub R Code § 30240 (a) *environmentally sensitive habitat areas shall be protected against any significant disruption of habitat values, and only uses dependent on those resources shall be allowed within those areas; § 30240 (b) development in areas adjacent to environmentally sensitive habitat areas...shall be sited and designed to prevent impacts which would significantly degrade those areas*). The University has stated in documents prior to the DEIR that "*the on-site seasonal pond and riparian channel above Younger Lagoon are considered sensitive habitats. the other onsite wetlands meet City, Coastal Commission and U.S. Army Corps of Engineers definitions....*" and that the 1998 study by NOAA (Draft Environmental Assessment, February 25, 1998, prepared by Harding Lawson Associates Infrastructure Inc., Bellevue, WA) found that Terrace Point hosts rare and endangered species that benefit from the wetlands on the site including the red legged frog, the northern harrier , burrowing owl, and kite and is, therefore, an ESHA. The DEIR concedes loss of nesting sites for raptors

12c. No discussion or mitigation measures are provided in the DEIR for the effects of the project on Antonelli Pond which is a significant wetland and biological resource adjacent to the project.

14

13a. Biological Resources: The project would have a substantial adverse effect on wetlands as defined by Section 404 of the Clean Water Act through removal, filling or other means including siting coastal-dependent developments in the onsite wetlands areas (Pub R 30255). The wetlands are environmentally sensitive areas that must be protected (Pub R 30240)

15

13b. Feasible less environmentally damaging alternatives to the filling of wetlands on the site have not been discussed in the DEIR (Pub R 30233)

16

13c. Inadequate mitigation measures have been provided to minimize adverse environmental effects to the on-site wetlands (Pub R 30233)

17

13d. The following questions concerning wetlands at the site, submitted during the scoping process, have not been addressed or have been inadequately addressed by the DEIR:

13d.(1) Determine and identify the extent of wetlands at Terrace Point 18

13d.(2) Describe the legal definitions, standards, and procedures used by the Coastal Commission to delineate wetlands and compare and contrast with other federal and state agencies 19

13d.(3) Comment on the fact that under the Coastal Commission standards only one of three wetlands factors (hydric soils, hydrophytes, wetlands hydrology) need to be established to constitute a jurisdictional wetland and that a wetland may be found in the absence of the finding of wetlands hydrology (e.g., "under the Commission's regulations, there does not need to be evidence of wetlands hydrology or hydric soils for property to be classified as wetlands....[if] ...hydrophytes exist....no additional evidence of wetlands hydrology or hydric soils is...necessary"....[U]nder the Commission's interpretive guideline and regulations, although water saturation is a dominant factor in determining the nature of soil development and the types of flora and fauna living in the soil and on its surface, evidence of wetlands hydrology or hydric soils is not per se required for property to be classified as wetlands. Rather, "[w]etland shall be defined as land where the water table is at, near, or above the land surface long enough to promote the formation of hydric soils *or* to support the growth of hydrophytesConsequently, evidence that hydrophytes exist on a property to a degree permitting jurisdictional wetland determination renders unnecessary any additional evidence of wetland hydrology or hydric soils.", Kirkorowicz v California Coastal Commission (2000) 83 CA4th 980.) 20

13d.(4) State the legal significance, if any, to determinations by the California Coastal Commission of the 1997 Corps of Engineers wetlands delineation 21

13d.(5) State the University's position regarding whether it is governed by §13577 (Cal. Code Of Regulations Title 14. [natural resources], Division 5.5. [California Coastal Commission], Chapter 8. [implementation plans], subchapter 2. [Local Coastal Programs (LCPs) and State University or College Long Range Development Plans (LRDPs)], article 18. [map requirement and boundary determination criteria], §13577 [criteria for permit and appeal jurisdiction boundary determinations]); and set forth its arguments and authorities relied upon in detail on the issues of 1) 13577 applies to a public institution; and 2) whether 13577 could not apply to the University in any event as a co-equal state agency. 22

13d.(6) Identify hydric soils at Terrace Point 23

- (a) explain the various definitions of "hydric soils" including the definition used in the LRDP EIR, the definition used by the Coastal Commission, and the definition used by other governmental agencies
- (b) explain the universe of methods available to identify hydric soils
- (c) contrast the NTCHS definition for hydric soils and the Coastal Commission guidelines separate criteria for hydric soils (e.g. p. 87 of the guidelines defines hydric soils as soils which "for a significant period of the growing season have reducing conditions in the major part of the root zone and are saturated within [10 inches] of the surface")
- (d) comment on the fact that **all** the soils on the Terrace Point site, with the possible exception of the Elkhorn Sandy Loam 2-9% (which only occupies a very small portion of the site about in the middle according to "site soils" graphs in prior DEIRs for the site) are considered "hydric soils" under the NCR's lists
- (e) explain methods used for the LRDP EIR to identify hydric soils
- (f) conduct a complete survey of soil types at various depths at Terrace Point up to 48"
- (g) describe the current extent of hydric soils at Terrace Point
- (h) in what parts of Terrace Point is the substrate predominantly **hydric soil**?

- (i) consider the findings by John Gilchrist that all areas (93 areas within 3 sites) identified as wetlands under the 1993 survey contained hydric soils thus confirming the 11.6 acre delineation under the 1-criterion approach to the delineation of wetlands
- (j) explain whether and how the extent of hydric soils at Terrace Point has changed and may change in the future depending on reasonably foreseeable conditions
- (k) comment on whether there are any difficulties in observing or identifying hydrophytes at Terrace Point in the dry part of the year vs. the wet part of the year
- (l) comment on the "anisotropic" properties of the soil at Terrace Point (e.g. "The discontinuous layers of sand, silt, and clay reduce the vertical permeability of the soil, while maintaining relatively high horizontal permeability. Unsaturated flow of water can be retarded at a textural boundary, even where the courser material underlines the finer.")
- (m) while conducting the soils surveys for wetlands analysis also determine whether any of the soils on the Terrace Point site would be considered "prime agricultural soil" if irrigated

23

13d.(7) Identify hydrophytes present at Terrace Point

- (a) explain the various definitions of "hydrophytes" including the definition used in the LRDP EIR, the definition used by the Coastal Commission, and the definition used by other governmental agencies
- (b) state whether *baccharis douglasii* is an obligate wetland species which means that more than 99% of the time it is associated with wetlands
- (c) explain the universe of methods available to identify hydrophytes
- (d) explain methods used for the LRDP EIR to identify hydrophytes
- (e) describe the current spatial extent of hydrophytes and their frequency at Terrace Point including *baccharis douglasii*
- (f) explain whether and how the spatial extent of hydrophytes and their frequency at Terrace Point has changed and may change in the future depending on reasonably foreseeable conditions
- (g) observe and report on the extent of and changes in hydrophytes at Terrace Point over the period of a full year including the rainy season of normal or above normal rainfall
- (h) comment on whether there are any difficulties in observing or identifying hydric soils at Terrace Point in the dry part of the year vs. the wet part of the year
- (i) what parts of Terrace Point support "discernable" or "measurable" **hydrophytes** at **any** part of the year?

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13d.(8) Identify wetlands hydrology present at Terrace Point

- (a) explain the various definitions of "wetlands hydrology" including the definition used in the LRDP EIR, the definition used by the Coastal Commission, and the definition used by other governmental agencies
- (b) explain the universe of methods available to identify wetlands hydrology
- (c) explain that a finding of wetlands hydrology under Coastal Commission standards is supported by water coverage or saturation for a very short time during the year taking into account, among other things, that "In many regions [especially in arid and semiarid regions], depressional areas occur that may have indicators of all three wetland criteria during the wetter portion of the growing season, but normally lack indicators of wetland hydrology and/or hydrophytic vegetation during the drier portion of the growing season. In addition, some of these areas lack field indicators of hydric soil....examples of highly variable seasonal wetlands are pothole wetlands in the upper Midwest, playa wetlands in the Southwest, and vernal pools along the *coast of California*."
- (d) explain methods used for the LRDP EIR to identify wetlands hydrology
- (e) describe the current extent of wetlands hydrology (flooding, ponding, soil saturation, periodic anaerobic conditions etc.) at Terrace Point taking into consideration current and prior studies (e.g. the 1997 Strelow report, to wit: "*The coastal terrace on which the Long Marine Laboratory is located is essentially flat, having less than 1% slope in most areas and maximum slope of less than 2%. drainage is generally poor,*

25

and much of the site is subject to saturated soil conditions and temporary shallow inundation. Rainwater leaves the site primarily through evaporation, evapotranspiration, and seepage zones at the ocean cliff and at steep slopes above Younger Lagoon. [and the fact that in January and February, for instance, according to the 1996 wetlands mitigation study, 5 to 6" of rain falls per month but less than an inch disappears by evapotranspiration leading to extensive ponding on the site.] Portions of the site drain into Younger Lagoon, to De Anza mobile home park, or directly to the Pacific Ocean.")

- (f) what parts of Terrace Point are "covered **periodically**...by shallow water"?
- (g) in what parts of Terrace Point is the substrate that is **nonsoil saturated** with water **or covered** by shallow water for any part of the year?
- (h) comment on the extent to which ponding, flooding, saturation occurs at any area on Terrace Point using the any and all of the following definitions:
 - (1-1) frequently: more than 50 percent chance in any year, or more than 50 times in 100 years
 - (2-2) flooded: a condition in which the soil surface is temporarily covered with flowing water from any source, such as...runoff from adjacent or surrounding slopes...or any combination of sources.
 - (3-3) long duration: from 7 days to 1 month.
 - (4-4) growing season: the portion of the year when soil temperatures are above biologic zero at 50 cm (19.7") e.g. hyperthermic: February-December
- (i) explain whether and how the extent of wetlands hydrology at Terrace Point has changed and may change in the future depending on reasonably foreseeable conditions
- (j) observe and report on the extent of and changes in wetlands hydrology over the period of a full year including the rainy season of normal or above normal rainfall (as stated in the 1996 wetlands mitigation study "precipitation [27 inches is] concentrated in the winter and...the wetlands tend to dry out in the spring and remain dry until late fall or early winter when much of the groundwater storage capacity is recharged".) 25
- (k) observe and identify the extent of water coverage of Terrace Point in January and February during a normal or above normal rainfall season
- (l) conduct and identify the source of all ground water flowing onto, on or over the Terrace Point site (e.g. water flow from nearby coastal hills and terraces; direction of water flow across Terrace Point considering the following: "All the surface water from the nearby hills and terraces moves directly across the Terrace Point property (and most nearby coastside properties) toward the ocean. This can be discerned as almost a sheet of water after heavy rains and migrates toward the ocean for days after a heavy rain. This happens for periods of 7 days or more almost every year during the growing season which is most of the year in Santa Cruz."
- (m) conduct an in-depth geological and hydrologic survey of the subsurface water and subsurface water flow on or related to the Terrace Point site (e.g. groundwater depths, etc.) taking into consideration the findings in the 1994 DEIR for the Wells Fargo development that says bedrock is 3.5 to 9 feet from the surface and that says groundwater is at depths of 4-8 feet
- (n) collect anecdotal and photographic evidence from citizens and nearby residents of the location and extent of water coverage, flooding, ponding, saturation, periodic anaerobic conditions etc. at Terrace Point during the rainy season (see declarations and photographs gathered by the Terrace Point action network; note that anecdotal evidence of nearby residents indicate that most the site is covered by water throughout the rainy season. These residents confirm that during the rainy season when water stands on most of the site (except those areas that have since been paved over by the discovery center and the NMFS building), the vegetation also changes in the wet areas; and that a great variety of wildlife not present in the dry season comes to use the area as habitat. This anecdotal evidence also confirms that the three disparate wetlands areas shown on current delineations merge together during the wet season; and that the vegetation and wildlife follow into the area that flow together.)

- (o) observe and report on actual and potential linkages between wet areas at Terrace Point during the rainy season of normal or above normal rainfall; does water from distinct wet areas flow into other wet areas on Terrace Point by surface or subsurface means; or into other wet areas nearby Terrace Point by surface or subsurface means. Comment on the significance of such linkages and how the separate wetlands areas at Terrace Point function as a system. consider the inter-relationships between wetland areas. The three wetlands areas at Terrace Point cannot be regarded as separate entities particularly because they flow into each other during the rainy season. The interpretive guideline recognizes that the Coastal Act requires wetlands be maintained and, where feasible, be restored; and that they are not isolated, independently functioning systems but rather dependent upon and highly influenced by their surroundings. Indeed, the Commission cautions that when it determines that any adjacent area is necessary to maintain the functional capacity of a wetland, it will require the area be protected against any significant disruption of habitat values consistent with section 30240, subdivision (a). (interpretive guideline at pp. 31, 33). 25
- (p) comment on whether there are any difficulties in observing or identifying wetlands hydrology at Terrace Point in the dry part of the year vs. the wet part of the year
- (q) gather all rainy season aerial photographs of Terrace Point that might show the extent of wet areas on the parcel after significant rainfall periods

13d.(9) Consider how the wetlands and wetland factors present at Terrace Point may expand and contract over various periods of time: including during a normal year; based on fluctuations in rainfall; and over a long period of time up to 100 years

- (a) comment on the following: "Terrace Point was farmed as recently as 1988. extensive wetlands were found using the three criteria COE definition in 1994. is it reasonable to assume that over a period of 7 years the site is going to transition from the wetlands delineated in 1993 to the wetlands now delineated absent intentional draining?" 26
- (b) comment on the following: " the EPA definition only requires that "the site wet or soggy **for several weeks or more** of the year". The Terrace Point site is definitely wet or soggy during February every year. in January and February, for instance, according to the 1996 wetlands mitigation study, 5 to 6" of rain falls per month but less than an inch disappears by evapotranspiration leading to extensive ponding on the site. Furthermore, "several weeks" is more than adequate to create hydric soils and promote the growth of hydrophytes." 28

13d.(10) Comment on how the water flow in, over and around Terrace Point, including which migrates through the wetlands, affects other adjacent properties including Younger Lagoon and Antonelli Pond

- (a) consider University information, e.g. that the seasonal wetland that is located near the east property boundary and the one located just north of the CDFG oiled wildlife center both drain into younger lagoon 27
- (b) comment on the extent to which the wetlands at Terrace Point buffer higher quality wetlands at Younger Lagoon and Antonelli Pond

13d.(11) Identify resident and transient wildlife at Terrace Point that may utilize or benefit from the wetlands at Terrace Point directly or indirectly

- (a) identify such wildlife over an entire year's cycle and note the changes in type and numbers of resident and transient species during the rainy season
- (b) take into account the University information that the "seasonal pond...located between the National Marine Fisheries Service facility and the Seymour Marine Discovery Center....supports a variety of waterfowl and shorebird species" as do "the seasonal drainage feeding younger lagoon" (which comprises all the other wetlands areas at Terrace Point) 28

- 13d.(12) Identify areas of open space, wildlife habitat, or ESHAs adjacent to Terrace Point that are affected directly or indirectly by human activities at Terrace Point including areas that are or were wetlands or potential wetlands | 29
- 13d.(13) Identify prior encroachments into areas that are or were wetlands or potentially wetlands | 30
- 13d.(14) Describe how previous construction or other human activities have degraded areas that are wetlands or potentially wetlands and how the wetlands in these areas might be created and/or restored (30233 (a)... filling...of...wetlands...shall be limited [not to include buildings etc.]; 30233 (c)...filling...in existing...wetlands shall maintain or enhance the functional capacity of the wetland or estuary) | 31
- 13d.(15) Comment on buffers required for wetlands | 32
- 13d.(16) Comment on prior wetlands delineations including the 1993 delineation that identified 11.6 acres of wetlands at Terrace Point and the 1997 delineation that identified apx 4 acres | 33
- 13d.(17) Comment on the wetlands delineations and findings made by investigators other than those retained by the University or governmental agencies (e.g. Phil Greer, of Wetland Research Associates; Dr. Robert Curry) | 34
- 13d.(18) Comment on wetlands delineations that might be made using approaches and criteria other than those used by the University or which support the University's delineation | 35
- 13d.(19) Furnish all raw data, memoranda, correspondence, emails and other documents in the files of the UC consultant Huffman & Associates for consideration by other investigators concerning the wetlands | 36
- 13d.(20) Attach to the LRDP EIR, as an appendix, any correspondence or memoranda that have circulated between UC and the Coastal Commission | 37
- 13d.(21) Release to the public the September, 2000 preliminary determination of wetlands at the site prepared by Coastal Commission biologist, John Dickson and all raw data, notes, correspondence, emails, and other materials associated with this report | 38
- 13d.(22) Include, as an alternative under the LRDP EIR, various open space alternatives whereby the existing and potential wetlands at Terrace Point would be preserved and enhanced to use what remains of the 60 ac. parcel as predominantly a wetlands habitat and study area similar to the wetlands at Carpenteria, California | 39
14. Biological Resources: The project will interfere substantially with the movement of wildlife. No explanation is provided in the LRDP or the DEIR of how wildlife will find their way to the "corridor" provided; or as to the effectiveness of a narrow and isolated strip of land; or how the "corridor" is cut off from other habitat areas (significantly the wetlands) so that no passage to the corridor is possible from those areas. | 40
- 15a. Biological Resources: The project is in conflict with provisions of the City of Santa Cruz General Plan adopted for the purpose of avoiding or mitigating an environmental effect. No explanation or mitigation measure is adopted to make the LRDP consistent with the City of Santa Cruz General Plan | 41

15b. Biological Resources: The project is in conflict with provisions of the California Coastal Act regarding all matters where the Coastal Act is cited in this letter. No explanation or mitigation measure is adopted to make the LRDP consistent with the Coastal Act in any of these instances. 42

16. Biological Resources: No discussion is presented on how the project will affect, maintain, enhance, and restore marine resources and the biological productivity of coastal waters (Pub R 30230). This is particularly an issue with regard to seawater intake and discharge and, in particular, the temperature and contaminants associated with such intake and discharge. 43

17. Biological Resources: The project threatens to significantly degrade and threaten the continuance of adjacent environmentally sensitive habitat areas (Pub R 30240). There is no discussion in the DEIR of the effects of the project on Antonelli Pond. There is no discussion of the effect of the project on adjacent habitat areas due to the growth inducing aspects of the project. 44

18. Cultural Resources: The EIR inadequately addresses cultural resources. The mitigation measure for addressing the discovery of human and potentially Native Indian remains on site during construction is inadequate in that it does not address the possibility of locating artifacts or habitation sites; and fails to provide for on site supervision by a licensed archeologist or other qualified person 45

19. Geology And Soils: The project is inappropriately sited with regard to coastal bluffs which poses a hazard to people and property; and which will require the alteration of bluff and cliffs in the near or long term (Pub R 30253, Pub R 30235). The setbacks from the bluff are inadequate for 20 years: much less longer periods of time. No development should be allowed so close to the coastal bluffs that those bluffs require reinforcement particularly because there is habitat for special status species (Black Swift) on the bluffs. 46

20. Geology And Soils: The DEIR inadequately addresses the threat of inundation by tsunamis. 47

21. Geology And Soils The DEIR does not address the problem of loss of topsoil by construction activities on agricultural land. 48

22. Hazardous Materials: The soil on-site is contaminated with agricultural pesticides that have accumulated for many years. When these soils are disturbed during construction they will pose a significant risk to the nearby residents of De Anza mobile home park because of the prevailing heavy winds that blow from the project site toward De Anza. This effect is not adequately discussed in the DEIR and no mitigation measures are provided. All soil on the site where construction activities are contemplated must be remediated prior to any ground breaking for construction: that is, it must be dug up; covered with plastic to prevent dispersion; and trucked off the site and replaced with non-contaminated soils. 49

23. Hydrology And Water Quality: The project violates water quality standards and waste discharge requirements. The DEIR fails to demonstrate how the project will minimize waste water discharges (Pub R 30231) and provides no mitigation measures (except for the use of water efficient appliances) for this adverse effect. 50

24. Hydrology And Water Quality: The project violates water quality standards and waste discharge requirements because neither the LRDP nor the DEIR does discuss waste water reclamation (Pub R 30231). 51

25. Hydrology And Water Quality: The project violates water quality standards and waste discharge requirements. The project fails to control runoff (Pub R 30231) and creates or contributes runoff which exceed the capacity of existing or planned stormwater drainage systems and provides substantial additional sources of polluted runoff. There is no discussion in the LRDP or the DEIR of non point source run off; and there is no mitigation proposed for this adverse effect despite the extensive on site parking lots. Prior EIRs for the Terrace Point site have specifically proposed traps and filters for drains to filter out non point source contaminants. An additional problem with traps and filters is that they must be monitored and maintained. This subject needs to be discussed in the DEIR and adequate mitigations and monitoring provided. 52

26a. Hydrology And Water Quality: The project violates water quality standards and waste discharge requirements. The project fails to prevent depletion of (Pub R 30231) groundwater supplies and interferes substantially with groundwater recharge such that there would be a net deficit in aquifer volume or a lowering of the local groundwater table level. The DEIR concedes that the effects on local water supply are significant and unavoidable and there is no sufficient mitigation or alternate source of water supply that can address the adverse effects. 53

26b. Hydrology And Water Quality: The mitigation measures proposed for the effects on the water supply are ineffective because they are based on *voluntary* compliance with conservation measures by the University; and (except for water saving appliances the University agrees to sue) on obligating the City of Santa Cruz to locate and provide additional sources for water supply that are currently unavailable. Even if the City could furnish additional sources of water it would involve an additional environmental impact to do so. The DEIR does not provide an adequate analysis of the alternatives of providing additional water supplies or of the environmental impacts that would be involved with doing so. 54

27. Hydrology And Water Quality: The project violates water quality standards and waste discharge requirements. The project fails to prevent interference with surface waterflow (Pub R 30231) and substantially alters the existing drainage pattern of the site or area. Prior studies of the area have conclude that "all the surface water from the nearby hills and terraces moves directly across the Terrace Point property (and most nearby coastside properties) toward the ocean. This can be discerned as almost a sheet of water after heavy rains and migrates toward the ocean for days after a heavy rain. This happens for periods of 7 days or more almost every year during the growing season which is most of the year in Santa Cruz." The substantial construction proposed for Terrace Point will interfere with this water flow and there is no discussion in the LRDP or the DEIR on the effects of such interference; or any mitigation measures proposed on how to deal with this significant environmental impact. 55

28. Land Use And Planning: The project inadequately provides for public access from the nearest public roadway to the shoreline and along the coast and interferes with the public's right of access (Pub R 30210-30212). UCSC has historically restricted public access to the Terrace Point area and particularly to the beaches and shoreline adjacent to the project site. It must provide a mitigation measure to provide for such public access and this is not discussed in the LRDP or the DEIR. 56

29a. Population And Housing: The project is growth inducing by encouraging substantial population growth by proposing new homes and the extension of roads and other infrastructure. The proposed housing is unnecessary and violates Coastal Act standards. The LRDP and DEIR fail to address the following issues or provide mitigation measures to deal with them: 57

29b. Population And Housing: How would housing that is described in the LRDP and DEIR as "short term" be guaranteed to be short term in perpetuity? 58

29c. Population And Housing: How would housing be guaranteed to be related to persons working on site 59

29d. Population And Housing: Housing is not needed; already provided in large quantity on Mission St at the old Graniterock site. This is a factor that would mitigate the adverse "Population and Housing" impacts on the site but it not considered in the LRDP or the DEIR. 60

29e. Population And Housing: No mitigation measures are proposed for the "Population and Housing" impacts. One possible mitigation measure would be to house onsite workers on the upper UCSC campus and provide a shuttle service for trips to the site. Most of these workers are going to be commuting daily on and off site anyway. Therefore providing housing on the upper campus and a shuttle service would actually REDUCE the environmental impacts because otherwise the onsite workers will be commuting by car to and from the Terrace Point site. 61

30. Public Services: The DEIR inadequately addresses the effect of the project on public services including the need to provide additional physical facilities for fire protection, police protection, schools, parks, and other public facilities needed to serve the project and growth induced by the project (water, sewage etc). The LRDP and DEIR fail to discuss the environmental effects of the services already provided for Terrace Point: the extension of a major water line several years ago as part of the incremental and piecemeal development of this site; and the fact that the expansion of the City of Santa Cruz sewage system and widening of Mission St has been due, in large part, to preparing to accommodate this project. No mitigation measures are proposed for any of these impacts. 62

31. Public Services: The LRDP and EIR fails to explain how the project will minimize energy consumption (Pub R 30253) and no mitigation measures are provided for energy consumption in the LRDP or DEIR.. 63

32a. Transportation/Traffic: The project will cause an increase in traffic which is substantial in relation to the existing traffic load and capacity of the street system (trips, capacity, and congestion). Also, traffic caused directly and indirectly by the project will exceed local level of service standards. This is conceded in the DEIR to be a significant unavoidable impact. Despite this concession, the DEIR fails to discuss a number of traffic related impacts that need to be considered by any decision maker concerning this project:

32b. Transportation/Traffic: The traffic studies for the DEIR were limited to Mission Street. No studies were conducted for the DEIR on the effects of traffic on neighborhood streets such as Delaware; Swift; Almar, Natural Bridges, and West Cliff. While the traffic effects may be "significant and unavoidable" even without consideration of neighborhood streets, decision makers and the residents of Santa Cruz, have a right to have information about the impacts on local streets to evaluate this project. Additional studies must be done. 64

32c. Transportation/Traffic: How would the dining hall proposed on the site reduce the need to leave for meals? This is not quantified in the DEIR. 65

32d. Transportation/Traffic: How would the housing proposed for the site discourage automobile trips? This is not quantified in the DEIR. 66

32e. Transportation/Traffic: An inadequate range of mitigation measures to address traffic impacts are discussed in the DEIR. Examples would be prohibiting the extension of Shaffer Rd which will produce additional traffic on Delaware and be growth inducing for the area generally; traffic calming measures for neighborhood streets; and requiring all onsite workers to use public transportation as a condition of employment or enrollment. This could be accomplished by prohibiting any private cars on site. These measures should all be paid for by the University. 67

32f. Transportation/Traffic: The traffic mitigation measures proposed in the DEIR are inadequate because they only promise "*fair share*" contributions *and* require the City or other agencies to plan and pay for the majority of improvements before the University's obligation to contribute is triggered. This practically guarantees that the mitigations will not occur or will be a very long time coming. It is not fair for the University's impacts to require the City to undertake additional capital improvement projects. If the University causes impacts, it should pay for the entire amount of the mitigation measures, even if such measures may benefit the public as a whole. The University also admits in the DEIR that even *with* the proposed traffic mitigations, the adverse traffic effects may be unavoidable. 68

32g. Transportation/Traffic: What mitigation measures will the University provide for impacts to the residents of Santa Cruz from traffic, noise, and traffic related impacts on public services resulting from the project and growth induced by the project? 69

33. Transportation/Traffic: The project fails to provide commercial facilities that will minimize the use of coastal access roads (Pub R 30253). If the University is truly attempting to provide a self contained community at Terrace Point that will obviate the need for off site trips it must provide a greater range of services for the "residents". Since this is probably infeasible it reinforces the idea that onsite workers and students should be housed and serviced on the upper campus and transported to the Terrace Point site by shuttle only. 70

34. Transportation/Traffic: The project fails to facilitate transit services (Pub R 30252). There is no discussion or mitigation measures proposed addressing how the project will facilitate transit services. 71

35. Transportation/Traffic: The project fails to provide nonautomobile circulation within the development (Pub R 30253). There is no discussion or mitigation measures proposed addressing how the project will provide nonautomobile circulation within the development. 72

36. Utilities And Service Systems: The EIR fails to adequately analyze the additional water and wastewater facilities that HAVE and WILL be required as a result of the direct and indirect effects of the project as otherwise discussed above at topic 30 | 73

37. Utilities And Service Systems: Insufficient water supplies are available to serve the project as discussed above at topics 23 to 27. | 74

38. Utilities And Service Systems: There is no discussion in the LRDP or DEIR addressing whether available landfills are sufficient to accommodate the solid waste disposal needs of the project and the additional development that will be induced by the project | 75

39. Project Alternatives: The EIR does not adequately address project alternatives, particularly in view of the fact that a major purpose of the LRDP is to incorporate Coastal Act standards. Coastal Act standards that must be discussed in the DEIR include: | 76

39a. Project Alternatives: The requirement that development be contiguous with existing developed areas (Pub R 30250) which is not the case with regard to this project. This would suggest a "No Project" alternative is appropriate. | 77

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39b. Project Alternatives: Under the Coastal Act (Pub R 30222) use priorities are:

- agriculture
- coastal dependent aquaculture (sites appropriate for such uses shall be protected for that use. Pub R 30222.5)
- coastal-dependent industry (Pub R 30255)
- coastal-related development (Pub R 30255)
- lower cost and public recreation (Pub R 30222)
- visitor-serving commercial recreational facilities
- private residential
- general industrial
- general commercial

There is no consideration given in the DEIR to project alternatives involving agriculture or aquaculture, both of which are clearly feasible at Terrace Point.. Beyond that, ***the majority of the proposed development for the project is not coastal dependent.*** The DEIR must discuss whether the following proposed uses are coastal dependent; and how more coastal dependent uses could be proposed for the project: ***How is each of the following developments at the site "dependent" on being located at this coastal location? Or at any coastal location? Could they be located away from the coast and still perform their function?***

78

- (1) Ocean Health Phase II
- (2) National Marine Fisheries
- (3) U.S. Geological Survey
- (4) Teaching facilities
- (5) Research facilities
- (6) Equipment storage
- (7) Maintenance facilities
- (8) Support facilities
- (9) Housing (note that the housing proposed is not "visitor serving" but is actually "private residential")

40. Mitigation Measures Generally: The mitigation measures proposed in the LRDP and the DEIR are inadequate in the particulars discussed above at topics 1 to 39. In addition, none of the mitigation measures sufficiently explain the following which must be fully explained in the FEIR:

79

40a. Mitigation Measures Generally: The ***funding*** for mitigation measures proposed (and that should be proposed) is not discussed in the LRDP or DEIR. A secure source of funding must be identified to make any of the mitigation measures credible and acceptable.

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40b. Mitigation Measures Generally: A crucial part of mitigation is *mitigation monitoring* that also requires a secure future source of income. This is probably the reason that practically no post-construction monitoring is proposed. However, such monitoring is legally required. For instance, ongoing monitoring is clearly required for the wildlife corridor; maintenance of the wetlands; maintenance of drainage and filter systems; and the effectiveness of all other mitigations proposed and that should be proposed as indicated in this letter. Discussion of post construction monitoring for each impact and issue listed in this letter must be provided in the DEIR. ***The monitoring must be subject to review and the imposition of further requirements under the auspices of an agency that is independent of the University and that has jurisdiction to require further mitigation and compliance as necessary.***

81

40c. Mitigation Measures Generally: How will the University mitigate the *increased demand for housing* in Santa Cruz that the persons employed at the site will create by moving to Santa Cruz to work on site? This will put further development pressure on Santa Cruz County generally; and can conceivably contribute to a wide range of social problems. This must be discussed in the DEIR.

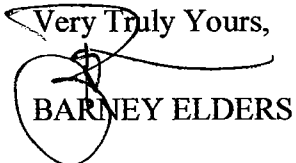
82

40d. Mitigation Measures Generally: No mitigation measures are provided for the recreation opportunities that are eliminated as a result of this project. Currently Terrace Point is a rich resource for hikers, nature study, bike riders and other recreation. These uses will be eliminated by the project. The buildings at Terrace Point will also limit the available land in Santa Cruz for public park purposes and put additional pressure on other parts of the City and County for construction of such facilities. How will the University mitigate these impacts?

83

Thank you for consideration of these comments.

Very Truly Yours,



BARNEY ELDERS

cc: California Coastal Commission
Terrace Point Action Network

COMMENT LETTER I-4: BARNEY ELDERS

I-4-1: The CLRDP land use designations, including Resource Protection, Resource Protection Buffer, and Open Space, as well as the CLRDP implementation measures, would apply through the year 2020. Environmental review under CEQA and approval by The Regents and by the Coastal Commission will be required before the new or updated CLRDP can be implemented. Any amendments to the land use designation map would also require CEQA review and approval by The Regents and the Coastal Commission.

I-4-2: See the responses to comments LA-2-1 and ORG-3-35, which explain the projections approach used to develop the future background traffic conditions in the project area for purposes of cumulative impact assessment. The projections approach accounts for growth in the area based on the land use designations of parcels such as the Swenson property and the Younger Ranch. The University is not aware of any proposals for the development of Younger Ranch.

I-4-3: The Draft EIR considers and addresses each potential long-range and cumulative environmental impact of implementation of the proposed project. Direct and indirect construction and operation impacts, and project and cumulative impacts, are addressed as appropriate. The impacts are described as they would occur over time, through full construction and operation of the development proposed under the CLRDP. The contributions of the project to future cumulative impacts from other past, present, and probable future related development are addressed as of the year 2020. As indicated on Draft EIR page 4-3, year 2020 is used as the horizon year for impact analysis because data believed to be reliable are available only through 2020. Cumulative traffic impacts are also evaluated for year 2010. A discussion of the assumptions associated with long-range future cumulative development related to the project is presented on pages 4-3 through 4-8 of the Draft EIR.

I-4-4: Although inclusion of significance thresholds is no longer mandatory under CEQA (*Communities for Better Environment v. Cal. Resources Agency* (2002) 103 Cal.App.4th 98), thresholds for determining the significance of environmental impacts are presented at the beginning of each topical section of Chapter 4, Environmental Setting, Impacts and Mitigation Measures (see Draft EIR Sections 4.1 through 4.16).

Impacts that do not exceed thresholds of significance are considered to be less than significant and therefore do not require mitigation measures. Nonetheless, significance thresholds are identified for all environmental topics, regardless of whether significant impacts and corresponding mitigation measures are identified.

I-4-5: In general, mitigation measures are considered to have mitigated a potentially significant impact if the implementation of the measure(s) would reduce the impact to a level that is below the stated threshold(s) of significance. Throughout the Draft EIR Chapter 4 discussions of mitigation, qualitative and/or quantitative effects of proposed mitigation measures are explained as needed for clarity. CEQA imposes no additional requirement.

I-4-6: All relevant Coastal Act criteria are addressed in this EIR. Please see the response to comment ORG-2-1, which explains the manner in which Coastal Act issues are addressed in this EIR and the CLRDP.

CA Section 30200 directs the Commission and local governments to use Section 30007.5 to resolve policy conflicts. That section states a legislative declaration:

“[W]here conflicts may occur between one or more policies of the division ... such conflicts [shall] be resolved in a manner which on balance is the most protective of significant coastal resources. In this context, the Legislature declares that broader policies which, for example, serve to concentrate development in close proximity to urban and employment centers may be more protective, overall, than specific wildlife habitat and other similar resource policies.”

This legislative declaration does not provide a standard against which environmental impacts can be measured. However, Section 30007.5 can be expected to be part of the policy framework in which the Coastal Commission reviews the CLRDP. The Section 30007.5 principle is reflected in various ways in the CLRDP. One example is the conflict between public requests for unrestricted access to the environmentally sensitive YLR and the University’s objective of protecting YLR resources. Both coastal access and marine resources are protected by Coastal Act policies. The CLRDP, in keeping with prior Commission decisions on access to YLR, resolves the conflict in favor of protecting the sensitive resources. Unrestricted public access is not allowed, but provision is made for enhanced visual access. Similarly, there are potential conflicts between visual resource and biological resource policies as applied to this site. The CLRDP resolves the conflict by adopting a smaller development footprint with a higher building profile, increasing visual effects but protecting biological resources consistent with Section 30007.5.

I-4-7: The Draft EIR does not consider views of the project site to be “insignificant.” The Draft EIR (page 4.1-19) states that “the open, undeveloped grasslands of the terrace property set against the ocean/sky backdrop, and other undeveloped portions of the project site, such as YLR [Younger Lagoon Reserve], are considered scenic resources in this EIR...” The Draft EIR concludes that CLRDP development would not have significant effects on scenic vistas, scenic resources, or the site’s visual character and quality for a variety of reasons, which are explained in the analysis on pages 4.1-31 through 4.1-43 of the Draft EIR. Generally, these reasons include CLRDP height limitations and design guidelines that would help to ensure that new buildings blend in with their surroundings, the small scale of the buildings in longer-range views, the proposed clustering of development and preservation of open space, and existing and proposed landscaping that would block views of the site.

The purpose of the EIR is to identify impacts and recommend mitigation measures for the currently proposed project. It is important to note, however, that the currently proposed CLRDP project would remove temporary office trailers, caretaker housing, and greenhouses on the project site, as listed in Table 3-2 on page 3-15 of the Draft EIR. This aspect of the project may help to reduce the existing “visual blight” to which the commenter refers.

The Coastal Act provision cited by the commenter (Public Resources Code Section 30251) states that “permitted development shall be sited and designed...where feasible, to restore and enhance visual quality in visually degraded areas.” CLRDP consistency with this Coastal Act provision is extensively discussed in Section 4.9, Land Use and Planning, of the Draft EIR (see Draft EIR pages 4.9-30, 4.9-33 through 4.9-34, and 4.9-43).

I-4-8: In developing the land use diagram the University has made a concerted effort to cluster the development on the site in three areas that are separated by intervening open space. For the reasons explained in the Draft EIR (pages 4.1-31 through 4.1-43) and in the response to comment I-4-7 above, the Draft EIR concluded that CLRDP development would not have significant effects on long-range views of the project site. The measures suggested by the commenter (fewer buildings, more space between buildings, one-story building heights, underground facilities and parking, “green roofs”) therefore would not be necessary for mitigating significant environmental effects, although UCSC may still consider these types of measures. Section 4.9, Land Use and Planning, of the Draft EIR evaluates CLRDP consistency with the Public Resources Code sections cited by the commenter (Sections 30251, 30212.5, and 30253) and concludes that the CLRDP would be consistent with these provisions.

I-4-9: Light and glare impacts of the CLRDP development program and near-term projects are discussed on pages 4.1-43 through 4.1-45 of the Draft EIR. The analysis indicates that “the increase in intensity of use at the site as a result of new development would increase the amount of light and glare produced at the project site, some of which would be visible from offsite vantage points as well as from the site itself. This additional light and glare could also contrast with the surrounding open space character and result in a deterioration of nighttime views from neighboring uses.” The analysis concludes, however, that impacts would be less than significant with application of policies, implementation measures, and design guidelines included in the CLRDP. These provisions include requirements for the lowest possible levels of lighting (see Draft EIR for details). The conclusion that impacts would be less than significant is supported by available evidence concerning the impacts and CLRDP implementation measures. The commenter has cited no contrary evidence that reduction of development would be the only effective mitigation.

I-4-10: The Draft EIR (pages 4.2-3 through 4.2-6) extensively discusses the project site’s agricultural history and soil quality. As noted on page 4.2-3 of the Draft EIR, the entire project site has been mapped as Unique Farmland that contains lesser quality soils. The terrace portion of the site contains only one soil type (Elkhorn sandy loam #132) that the California Department of Conservation, Division of Land Resource Protection, classifies as prime soil, provided that the soil is irrigated (which it is not, since no economically viable source of irrigation water is available). As background for the Draft EIR, the terrace portion of the property was surveyed and assessed using the California Department of Conservation Land Evaluation and Site Assessment (LESA) Model analysis. Five agricultural scenarios were evaluated by the LESA Model to demonstrate potential agricultural uses ranging from no-restrictions farming to 500-foot pesticide setbacks. In each scenario, the project site was shown to be a less-than-significant agricultural resource. The Draft EIR (pages 4.2-12 through 4.2-13) therefore concludes that development of

the project site for non-agricultural use would not have a significant impact on “Farmland” as defined by the California Resources Agency (i.e., Prime Farmland, Unique Farmland, or Farmland of Statewide Importance).

Since the project would not have a significant impact on onsite Farmland, the EIR need not consider alternatives that would include renewed agricultural use (e.g., small-scale organic farming) on the site. As noted in the Draft EIR (page 5-1), the CEQA *Guidelines* (Section 15126.6[a]) require an EIR to describe a range of reasonable project alternatives that would avoid or substantially lessen the project’s significant impacts (not less-than-significant impacts).

Section 4.9, Land Use and Planning, of the Draft EIR evaluates project consistency with the Coastal Act provision (Public Resources Code Section 30242) to which the commenter refers (see Draft EIR pages 4.9-26 through 4.9-29 and page 4.9-42). The analysis concludes that the CLRDP would be consistent with this Coastal Act provision.

I-4-11: The Draft EIR (General Mitigation Measure 4.2-1, page 4.2-15) recommends fencing along the project boundary with Younger Ranch. In addition to this mitigation measure, the Draft EIR discusses provisions of the CLRDP that would help avoid conflicts and development pressures on adjacent agricultural land. These CLRDP provisions include requirements for (1) setbacks between onsite development and adjacent agricultural uses, and (2) an indemnification and hold harmless agreement between the University and the Younger Ranch that would be designed to protect adjacent agricultural operators from the economic burden of legal claims arising from normal and reasonable farming operations. The latter requirement is one of the provisions recommended by the commenter.

The Draft EIR (pages 4.2-16 through 4.2-18) evaluates potential cumulative impacts on agricultural land due to CLRDP development. The analysis indicates that most of the land in the Santa Cruz westside study area (which includes land immediately north and northeast of the project site) has already been converted to non-agricultural uses, and that none of the remaining undeveloped parcels (except for a community garden area) is currently in agricultural use. The soil types in this area appear to be similar to those found on the project site, and therefore some of the vacant lands may qualify as Farmland under the Department of Conservation classification. It is considered likely, however, that these undeveloped lands lack an irrigation water source and are not potentially viable sites for renewed agricultural use due to urban conflicts and the economics of agriculture in the region. Furthermore, the City of Santa Cruz General Plan envisions and allows conversion of this land to urban uses. The Draft EIR therefore concludes that cumulative impacts on agricultural land in this area would be less than significant. The mitigation measures suggested by the commenter (prohibiting the University from placing development anywhere north of the Santa Cruz city limits, and requiring the University to obtain restrictive zoning changes from the County of Santa Cruz for this purpose) do not appear to be justified based on the level of impact anticipated in the areas immediately north and northeast of the project site. See also the response to comment PH-4-13. In addition, the zoning change measure would not be effective because use of University land is not controlled by local zoning.

The commenter also suggests placing a fence along the northern edge of the project property line to protect adjoining agricultural uses from “trespass.” The northern edge of the project site adjoins the Union Pacific Railroad right-of-way and land that is designated for industrial use by the City of Santa Cruz General Plan and is currently in industrial use (see Figures 4.9-1 and 4.9-2 of the Draft EIR). Since the northern portion of the project site adjoins the railroad tracks and already-developed land, placing a fence along this property line to protect agricultural uses does not appear justified. It is possible that the commenter meant to refer to the western boundary of the project site. Lands to the west are in Santa Cruz County, and County policy precludes non-agricultural development in this area. In addition, as indicated on Draft EIR page 6-1, the proposed project includes several elements designed to serve as a transition between urban and rural development and to provide a terminus to westward urban development at the City of Santa Cruz city limit. The land use plan clusters complementary uses, retaining undeveloped open lands, habitat areas, and buffers adjacent to neighboring agricultural uses. See further discussion in the response to comment PH-6-2. Applicable County land use policies, together with the policies and implementation measures of the proposed CLRDP, appear to be sufficient to prevent, appreciable increases in material pressures for non-agricultural development in lands to the west of the project site for the reasonably foreseeable future. Furthermore, as already noted above, the Draft EIR (General Mitigation Measure 4.2-1, page 4.2-15) recommends fencing along the western project boundary adjoining the Younger Ranch.

Section 4.9, Land Use and Planning, of the Draft EIR evaluates project consistency with the Coastal Act provisions (Public Resources Code Sections 30241 and 30242) to which the commenter refers (see Draft EIR pages 4.9-26 through 4.9-29 and page 4.9-42). The analysis concludes that the CLRDP would be consistent with these Coastal Act provisions.

I-4-12: The Coastal Act provision cited by the commenter is discussed in Section 4.9, Land Use and Planning, of the Draft EIR (page 4.9-27). As indicated in the Draft EIR, where conversion of agricultural lands is proposed in a local coastal program and the viability of existing agriculture is an issue under Section 30241, the Coastal Act provides specific guidance on how to analyze the viability issue. This guidance, under Section 30241.5, is not applicable to this project because there are no existing agricultural uses at this site except for the greenhouses and because the policy applies to local coastal programs. Even so, the Draft EIR includes an agricultural economic viability analysis of the project site in Appendix B. This analysis shows that the viability of any potential agricultural use on the project site is severely limited by conflicts with urban uses and other factors, and reintroduction of agriculture to the site is not feasible.

I-4-13: The Draft EIR discusses permanent loss of habitat, e.g., on page 4.4-64 as follows: “The aggregate loss of about 15 acres of raptor foraging habitat (including ruderal, non-native grassland, and coyote brush scrub-grassland), or about 28 percent of the current extent available at the site, would be offset by CLRDP Implementation Measure 3.2.6, which will protect and enhance these habitat types on the property.”

The commenter’s citation from the Public Resources Code mistakes “habitat areas” for “Environmentally Sensitive Habitat Areas,” which are discussed at some length in the Draft EIR, along with measures proposed to protect or improve them. There is an extensive narrative on

sensitive habitats on the project site, beginning on Draft EIR page 4.4-42. The Draft EIR is consistent with earlier documents in its determination that the seasonal pond and the riparian channel above Younger Lagoon meet the definition of an Environmentally Sensitive Habitat Area (ESHA) (see Draft EIR page 4.4-46). The commenter appears to suggest that the entire site should be considered an ESHA, but this would be an erroneous application of CA Section 30107.5, unsupported by the evidence. See also the responses to comments SA-3-17 and PH-4-1.

Migratory routes are an issue under CEQA when the project presents an obstruction, such as a residential development across a known travel route for migratory deer. The migrants at Terrace Point are birds, and the project would not have a significant effect on their movement or use of the seasonal wetlands on the site.

I-4-14: Activities that would occur on the Marine Science Campus under the CLRDP would have no direct or indirect impact on Antonelli Pond, because the campus site is separated from the pond by intervening roads and other properties. The northern and western margins of the terrace portion of the site may be used by wildlife that move among the Moore Creek Drainage, Antonelli Pond, and YLR, and for that reason CLRDP Implementation Measure 3.2.3 commits the University to “coordinate with the owner of the property immediately east of the Upper Terrace (across Shaffer Road) to promote the extension of the proposed wildlife corridor to Antonelli Pond.”

I-4-15: The comment’s statement concerning project effects on wetlands is not consistent with or supported by the information in the Draft EIR. With the exception of a small, 43-square-foot non-ESHA wetland, implementation of the CLRDP would not remove, fill, or otherwise affect onsite wetlands.

I-4-16: The Modified Land Use Diagram Alternative, analyzed in the Draft EIR on pages 5-16 to 5-21, would eliminate development on the upper terrace and would avoid filling the small non-ESHA wetland W7. See also pages 4.9-22 and 4.9-23 of the Draft EIR which describe other alternatives that were examined that would avoid filling of the one small wetland but were found to be environmentally more damaging.

I-4-17: Please see impact discussion on Draft EIR page 4.4-67 under “Sensitive Habitats and Wetlands.” See also pages 4.9-21 through 4.9-23, which show that the policies and implementation measures as well as the design of land use on campus would minimize impacts on wetlands. See also the response to comment I-4-15 above.

I-4-18: The presence and extent of wetlands are adequately addressed in the Draft EIR on pages 4.4-41 through 4.4-48. The Draft EIR also includes a figure (Figure 4.4-3) showing the location of the delineated wetlands. To the extent that the commenter needs further information on the delineation, that information is provided in detail in the Huffman-Broadway Group’s (HBG’s) January 2004 report.²⁴ Note that at the time that the Draft EIR was circulated, this report was made available to those who requested the report.

²⁴ Huffman-Broadway Group, Inc. January 2004. Investigation of the Presence and Geographic Extent of Wetlands on the Terrace Point and Younger Lagoon Reserve, University of California, Santa Cruz.

I-4-19: The Draft EIR (pages 4.4-5 and 4.4-6) presents the legal definitions of wetlands as defined by the Army Corps of Engineers (ACOE) and the California Coastal Commission (CCC). The Draft EIR (pages 4.4-42 and 4.4-43) also summarizes the approach to wetland delineation, which is in compliance with CCC and ACOE delineation guidelines. For additional details, the commenter is referred to HBG's January 2004 report, which covers this topic in detail, particularly the Background (pages 4-8) and Methods (pages 11-14) sections.

I-4-20: As described on pages 5 and 11 through 14 of HBG's January 2004 report, CCC wetland delineation guidelines only require one of the three basic wetland characteristics (i.e., hydrology, soils, or vegetation) to be present for an area to be considered a wetland. An area containing a preponderance of wetland plant species or hydric soils is considered presumptive evidence of the presence of wetland hydrology conditions. This presumption can only be rebutted by strong evidence of upland hydrology conditions. As discussed on page 25 of the HBG January 2004 report, even though some areas support wetland plant species, the hydrology of those areas clearly shows that these are upland areas.

I-4-21: The 1997 wetlands delineation was verified by the ACOE. Given that 5 years had lapsed since the 1997 delineation was verified by the ACOE, it is no longer valid according to Corps policy. The Corps delineation has no legal significance to the CCC.

I-4-22: The comment inquires about the relationship of the CLRDP to 14 CCR Section 13577, which concerns mapping of wetlands. The Coastal Act provides a statutory definition of wetlands (Section 30121; see Draft EIR page 4.4.6). Under CA Section 30519, after a local coastal program (LCP) is certified, permit authority passes to the local government except in certain areas, including wetlands, where the Commission permanently retains permit jurisdiction. Under Section 30603, the Commission also retains jurisdiction over appeal of locally issued permits for certain areas including land within 100 feet of a wetland. The Commission has adopted a regulation to aid in carrying out these responsibilities, 14 CCR Section 13577, which is entitled "Criteria for Permit and Appeal Jurisdiction Boundary Determinations." Based upon the statutory definition of wetlands, Section 13577 provides expansive criteria for delineating the boundaries of wetlands in those instances where Commission jurisdictional areas must be determined.

Coastal Act (CA) Section 30519 expressly excludes state university land from the system under which the Coastal Commission retains certain permit and appeal jurisdiction after Local Coastal Program (LCP) certification. Under CA Section 30605, after certification of a Long Range Development Plan (LRDP), permit authority over all of the land passes to the University. Thus the Section 13577 process of delineating Coastal Commission jurisdictional wetlands is not directly applicable in the case of a state university LRDP. Nevertheless, implementation of the Coastal Act wetland and ESHA policies through the LRDP requires that the University identify and map wetland resources. That process was governed by the statutory definition of wetlands (Section 30121). Delineation was also guided by principles reflected in Section 13577 as well as the Commission's *Statewide Interpretive Guidelines for Wetlands and Other Wet Environmentally Sensitive Habitat Areas*. The delineation relied upon methodology developed for the specific site conditions and agreed upon through extensive consultation between the

Huffman-Broadway Group and a Coastal Commission biologist. See further discussion on Draft EIR pages 4.4-6 through 4.4-8 and 4.9-20 through 4.9-23.

I-4-23: The detailed information noted by the commenter is not included in the Draft EIR, because, as a public information document, the Draft EIR presents only information that is relevant to the evaluation of environmental impacts. The Draft EIR summarizes the wetland definitions and describes the approach to delineation, which was consistent with wetland delineation methodologies of the ACOE and the CCC. The Draft EIR also presents the areal extent of jurisdictional wetlands on the Marine Science Campus (see pages 4.4-41 through 4.4-48). As explained below, detailed information about hydric soils is contained in HBG's wetland delineation report.

- (a) The various definitions of hydric soils are presented on pages 6 and 7 of HBG's January 2004 report.
- (b) The methods available to identify hydric soils are presented on pages 6, 7, 15, and 17 through 21 of HBG's January 2004 report. The ACOE 1987 wetland delineation manual contains additional information on the universe of methods available to identify hydric soils.
- (c) The commenter implies that the National Technical Committee for Hydric Soils (NTCHS) and CCC have distinct definitions and criteria for hydric soils. In reality, CCC staff generally relies on NTCHS definitions and criteria in making hydric soils determinations.
- (d) Pages 9 and 10 of HBG's January 2004 report provide this information.
- (e) Pages 15 and 17-21 of HBG's January 2004 report provide this information.
- (f) Wetlands delineation was conducted in accordance with ACOE and CCC wetland delineation guidelines, neither of which requires a complete survey of soil types at various depths up to 48 inches. HBG's investigation involved extensive soil analysis, which exceeded what is typically required in wetland delineation, including several exploratory pits to depths up to 48 inches. Results are presented in HBG's January 2004 report.
- (g) HBG's January 2004 report provides this information. All areas containing hydric soils occur within delineated wetlands.
- (h) See previous response.
- (i) HBG used 1993 and other delineations as an initial guide to identify areas that potentially may support wetlands. In accordance with ACOE and CCC wetland delineation guidelines, HBG's delineation was based on current conditions on Terrace Point. The 1993 and other delineations primarily relied on vegetation to delineate the extent of wetlands on Terrace Point and assumed wetland hydrology and hydric soil conditions were present where there was a preponderance of wetland plant species. HBG's January 2004 report treated a preponderance of wetland plant species as presumptive evidence of the presence of wetland

hydrology and hydric soil conditions, only to be rebutted where there was strong evidence of upland hydrology conditions.

- (j) Historic hydric soil conditions on Terrace Point as reflected in the National Resource Conservation Service (NRCS) soil survey for Santa Cruz County are not expected to change.
- (k) Most wetland indicator species are observable throughout the year with the exception of early annuals (e.g., *Oxalis pes caprae*), which are observable during the late wet and early dry seasons. HBG sampled vegetation at many points in time during the April 2001-January 2004 study period in order to capture the growth period of all wetland indicator species on site.
- (l) “Anisotropic” soil conditions were observed on several portions of Terrace Point. Page 24 of HBG’s January 2004 report notes that (1) most sample locations on Terrace Point were not homogenous with respect to soil moisture, but contained several different moisture classes within the soil profile sampled; (2) areas of surface flooding or ponding often did not support saturated conditions below the soil surface, or only contained saturated conditions in the uppermost soil layers (e.g., top 3 inches), but moist or wet soil layers below; (3) soils found to contain saturated layers during the rainy season rarely were saturated throughout the majority of the zone. All of these observations are indicative of “anisotropic” soil conditions. Terrace Point Action Network’s observations, in which water drained horizontally from saturated soil layers into the open soil pits, provide additional evidence of “anisotropic” soil conditions.
- (m) Please see page 4.2-3 in Section 4.2, Agricultural Resources, in the Draft EIR, which describes the soils on the project site and their designation under the Farmland Mapping and Monitoring Program of the California Department of Conservation as Unique (and not Prime) Farmland. One soil type on the site is classified as prime soils if irrigated. Please see pages 4.2-4 through 4.2-6 of the Draft EIR, which discuss the limitations on agriculture at the site. See also the response to comment I-4-10.

I-4-24: The detailed information noted by the commenter is not included in the Draft EIR because, as a public information document, the Draft EIR presents only the information that is relevant to the evaluation of environmental impacts. The Draft EIR summarizes the wetland definitions and describes the approach to delineation, which was consistent with wetland delineation methodologies of the ACOE and the CCC. The Draft EIR (pages 4.4-41 through 4.4-48) also presents the areal extent of jurisdictional wetlands on the Marine Science Campus. As explained below, detailed information about hydrophytes, in the context of wetlands delineation for the project, is contained in HBG’s wetland delineation report.

- (a) Pages 7 and 14 of HBG’s January 2004 report provide this information. The CLRDP EIR follows the CCC’s definition: “any macrophyte that grows in water or on a substrate that is at least periodically deficient in oxygen as a result of excessive water content.”

- (b) The National Wetland Inventory (NWI) list of plant species that occur in wetlands [California (Region 1)] identifies *Baccharis douglasii* as an obligate wetland (OBL) species. HBG notes that indicator assignments are not based on the results of a statistical analysis of species occurrence. They are best approximations of wetland affinity based on a synthesis of submitted review comments, published botanical literature, and field experience of Interagency Review Panel members. For these reasons, commenter's assertion that *Baccharis douglasii* is associated with wetlands more than 99 percent of the time is not technically correct. Correctly stated in accordance with NWI protocol, *Baccharis douglasii* is estimated to occur in wetlands more than 99 percent of the time.
- (c) The ACOE 1987 wetland delineation manual identifies several indicators that may be used to determine whether hydrophytic vegetation is present on a site, including (1) findings that more than 50 percent of the dominant species are obligate wetland (OBL), facultative wetland (FACW), or facultative (FAC) on lists of plant species that occur in wetlands; (2) observations of plant species growing in areas of prolonged inundation and/or soil saturation; (3) morphological adaptations; (4) technical literature; (5) physiological adaptations; and (6) reproductive adaptations.
- (d) Pages 15 through 17 of HBG's January 2004 provide information regarding the method used to identify hydrophytes.
- (e) HBG's January 2004 report provides information regarding the spatial distribution of hydrophytes on the Marine Science Campus. All areas containing hydrophytes occur within delineated wetlands. Attachment 12 shows the distribution of *Baccharis douglasii* on the site. In some locations (delineated as wetlands), *Baccharis douglasii* is acting as a hydrophyte. In others (not delineated as wetlands), *Baccharis douglasii* is not acting as a hydrophyte due to the presence of upland hydrology conditions.
- (f) Page 10 of HBG's January 2004 report describes historical land use and vegetation change at Terrace Point. Major land changes include the agricultural development, discontinuation of agricultural activities, and construction of laboratory facilities and other infrastructure. These changes undoubtedly have affected the historic distribution of hydrophytes on Terrace Point; however, these questions are not pertinent to the wetlands delineation, which is, consistent with the CCC and ACOE guidelines, focused on the current distribution of wetlands.
- (g) Detailed analysis of changes in the distribution and extent of hydrophytes was not part of the wetland delineation, but major changes were not observed. HBG noted a minor change in the distribution and extent of annual rabbitsfoot grass (*Polypogon monspeliensis*) during the study period (i.e., more present in 2002 than in 2003).
- (h) As described on pages 12 and 13 of HBG's January 2004 report, soils on Terrace Point developed under crop cover or grasslands and consequently have organic-rich, dark brown surface layers with low chroma values, which inhibit the use of soil color as an indicator of hydric soils conditions and may mask the presence of redoximorphic features. Few areas

have evidence of clear and distinct soil redoximorphic features (e.g., oxidized rhizospheres). These factors make it difficult to observe/identify hydric soils on Terrace Point during the dry season. Observation and identification of hydric soils on Terrace Point was conducted during the wet season because one can make first-hand observations of flooding, ponding, and soil saturation for long durations (periods greater than 7 continuous days following normal rainfall conditions) within the major portion of the root zone of the dominant plant species.

- (i) HBG's January 2004 report provides this information. All areas with hydrophytes occur within delineated wetlands. Most hydrophytes are observable throughout the year with the exception of early annuals (e.g., *Oxalis pes caprae*), which are observable only during the late wet and early dry seasons.

I-4-25: The detailed information noted by the commenter is not included in the Draft EIR but is contained in HBG's wetland delineation report as described below.

- (a) Pages 5 and 6 of HBG's January 2004 report provide information regarding the various definitions of wetlands hydrology.
- (b) The ACOE 1987 wetland delineation manual identifies several indicators that may be used to determine whether wetland hydrology is present on a site, including (1) recorded data, (2) visual observation of inundation, (3) visual observation of soil saturation, (4) water marks, (5) drift lines, (6) sediment deposits, and (7) drainage patterns.
- (c) CCC wetland hydrology criteria follow those established by the ACOE. The Corps 1987 Manual discusses hydrology in terms of a percent of the growing season when an area is wet (page 36). According to Corps Guidance Memorandum October 7, 1991 (page 1), "Generally speaking, areas which are seasonally inundated and/or saturated to the surface for more than 12.5 percent of the growing season are wetlands. Areas saturated to the surface between 5 percent and 12.5 percent of the growing season are sometimes wetlands and sometimes uplands. Areas saturated to the surface for less than 5 percent of the growing season are non-wetlands. The percent of growing season translates to a number of days, depending on the length of the growing season in any particular area (e.g., 12.5 percent of a 170-day growing season is 21 consecutive days)." The HBG study has taken a conservative analysis approach and assumed that the inundation/saturation criteria are met where continuous inundation and/or saturation occurs for greater than or equal to 5 percent of the growing season (18 days).
- (d) Pages 17 through 21 of HBG's January 2004 report provide information regarding the method used to identify wetland hydrology at the Marine Science Campus.
- (e) HBG used the 1993 and other delineations as an initial guide to identify areas that potentially may support wetland hydrology conditions. In accordance with ACOE and CCC wetland delineation guidelines, HBG's delineation was based on current conditions on Terrace Point. HBG's January 2004 report provides information on the current extent of

wetland hydrology on Terrace Point. All areas containing wetland hydrology conditions occur within delineated wetlands.

- (f) Although various portions of Terrace Point experience periodic flooding or ponding, not all of these areas meet wetland hydrology and hydric soil criteria. Attachments 11a and 11b in HBG's January 2004 report identify specific locations on Terrace Point subject to periodic flooding or ponding, although the list is not inclusive.
- (g) All undeveloped portions of Terrace Point are covered with soil. There are no undeveloped areas with non-soil that is saturated with water or covered by shallow water for any part of the year.
- (h) HBG interprets the commenter's question to mean which areas of Terrace Point are subject to wetland hydrology and hydric soil conditions under normal rainfall. HBG's January 2004 report provides information on the current extent of wetland hydrology on Terrace Point. All areas supporting wetland hydrology conditions occur within delineated wetlands.
- (i) See the response to comment ORG-2-31.

Considering the level of development on Terrace Point over the years, wetlands hydrology has changed somewhat due to placement of additional fill, increases in impervious surfaces, increased runoff volumes, altered drainage patterns, and changes in groundwater hydrology. Under foreseeable conditions, the wetland hydrology would continue to change, but under the proposed CLRDP the changes to the wetlands would be an improvement over current conditions. The CLRDP would decrease sediment loads, repair erosion sources, enhance infiltration, place protective buffers around the wetlands, control runoff, and improve the quality of water entering the wetlands.

- (j) HBG's January 2004 report contains information on the extent of wetland hydrology over a full year, including the rainy season with normal or above-normal rainfall. All areas supporting wetland hydrology conditions occur within delineated wetlands. Detailed analysis of the changes in wetland hydrology over a full year, including the rainy season with normal or above-normal rainfall, was not conducted as it is not required for purposes of wetland delineation, but major changes were not observed.
- (k) HBG's 2002 and 2003 wet season hydrologic monitoring included identification and observation of the extent of water coverage on Terrace Point in January and February during a normal or above-normal rainfall season. See Attachments 11a and 11b of HBG's January 2004 report for more information.
- (l) The commenter appears to confuse groundwater and surface water. Only surface water (not groundwater) flows "onto, on or over" Terrace Point. Pages 22 through 23 and 28 through 31 of HBG's January 2004 report contain information on site hydrology from a wetland delineation standpoint. Please also see the response to comment I-4-55.

- (m) Please also see the response to comment I-4-55. Information on the subsurface and surface water is provided on pages 4.8-6 through 4.8-12 of the Draft EIR. Bedrock depths throughout the site vary depending on the surface topography of the underlying Santa Cruz Mudstone and thickness of the alluvium. Depending on the particular locations, bedrock depth can be observed at 5 to 9 feet below ground surface (see Draft EIR page 4.6-4). Groundwater levels fluctuate seasonally (see Draft EIR page 4.8-14). Ample geological and hydrological data are available to analyze impacts of the proposed CLRDP. Because of this, it is not necessary to complete an additional in-depth geological and hydrological study.
- (n) Terrace Point Action Network provided photographs showing flooding and ponding on Terrace Point. Additional anecdotal evidence was provided at public meetings. This information was not sufficient to determine whether wetland hydrology and hydric soils were met (e.g., saturation through the majority of root zone for 7 or more continuous days under normal rainfall conditions) or provide enough data on the location and extent of wetland hydrology, soils, and vegetation conditions to allow for a detailed wetland delineation.
- (o) Pages 28 through 31 and Attachment 9 of HBG's January 2004 report provide information on actual and potential hydrologic linkages between Terrace Point wetlands. A clear hydrologic connection exists among W1, W2, W3, and W6 (i.e., downstream flows converge and drain to the northeastern finger of Younger Lagoon). W4 and W5 also drain to downstream waterbodies. W7 and W8 are hydrologically isolated. With the exception of the W1-W2-W3 complex, there is not significant subsurface and surface water exchange between the different wetlands in the manner suggested by the commenter.
- (p) With a few exceptions (e.g., W5), wetland hydrology conditions are difficult to observe during the dry season due to the lack of precipitation-driven surface water flow, flooding, ponding, and soil saturation. Wetland hydrology conditions are not difficult to identify during the wet season, as evidenced by HBG's first-hand observations of flooding, ponding, and soil saturation during 2001-2003.
- (q) HBG gathered all historical aerial photographs of Terrace Point that were readily available. Attachment 2 of HBG's January 2004 report contains a list of all photos reviewed, including some from the wet season (e.g., 20 February 1967, 10 February 1976).

I-4-26: It is possible that differences in the 1993 and 2003 delineations could be the result of changes in site conditions, rather than intentional draining. However, the primary source of the difference between the 1993 and 2003 delineations is the methodology used to delineate wetlands. It should be noted that the 1993 delineation primarily relied on vegetation to delineate the extent of wetlands on Terrace Point and assumed wetland hydrology and hydric soil conditions were present where there was a preponderance of wetland plant species. HBG's January 2004 report treated a preponderance of wetland plant species as presumptive evidence of the presence of wetland hydrology and hydric soil conditions, only to be rebutted where there was strong evidence of upland hydrology conditions.

It is true that various portions of Terrace Point are wet or soggy for several weeks or more of the year. However, it should be noted that wetland hydrology and soils criteria are only met if, under normal rainfall conditions, soils are flooded or ponded for 7 or more continuous days, or saturated for 18 or more continuous days.

I-4-27: Pages 28 through 31 and Attachment 9 of HBG’s January 2004 report provide information on water movement on Terrace Point and to downstream waterbodies. Flows from W1, W2, W3, and W6 converge and drain to the northeastern finger of Younger Lagoon. W5 also drains to Younger Lagoon under unusually high rainfall conditions. W4 flows to a culvert beneath the De Anza Santa Cruz residential community before eventually discharging to Natural Bridges Lagoon. Water from the site does not drain to Antonelli Pond.

Several Terrace Point wetlands (W1-3, W5, W6) act as a water source and perform important buffering functions (e.g., water quality protection) for Younger Lagoon. None of the wetlands on Terrace Point provides buffering functions for Antonelli Pond.

I-4-28: The commenter requests that the EIR identify all wildlife using wetlands at Terrace Point, especially the seasonal pond at the center of the Terrace, and note changes by season. Such a list is provided in Draft EIR Table 4.4-1, which presents all special-status species that have a theoretical potential to occur in the project vicinity. In a CEQA document, analysis of environmental effects need not be exhaustive, but is judged in light of what is reasonably feasible (CEQA *Guidelines* Section 15151). Nor does CEQA require that an agency conduct all research or study recommended by commenters, as long as a good faith effort at full disclosure is made in the EIR (CEQA *Guidelines* §15204[a]). Notwithstanding the CEQA standard of reasonableness, the commenter may wish to review some of the documents incorporated by reference that provide greater detail, especially “Final Results of Biological Resource Survey for the Proposed University of California Santa Cruz Marine Science Campus,” prepared by EcoSystems West Consulting Group, August 2002.

The comment regarding the seasonal pond and YLR seasonal drainage is addressed in the response to comment I-4-13.

I-4-29: See Draft EIR Section 4.9, which analyzes potential effects of human activity on biological resources on the project site. See also CLRDP Policies 3.4 through 3.7, which have been made part of the project (see Draft EIR pages 4-54 to 4.4-59) to avoid and minimize these effects.

I-4-30: Page 10 of HBG’s January 2004 report provides information on historical land use on Terrace Point. Twentieth-century agricultural development likely affected areas that were wetlands or potential wetlands. However, construction of Long Marine Laboratory buildings and roads has not encroached on onsite wetlands.

I-4-31: See the response to comment I-4-30 above.

I-4-32: HBG’s January 2004 ESHA analysis and buffer recommendations letter report provides this information. See also the response to comment ORG-3-41.

I-4-33: In accordance with ACOE and CCC wetland delineation guidelines, HBG's January 2004 report focused on existing conditions on Terrace Point. Other wetland delineations prepared for the site were not based on current site conditions. Furthermore, the 1993 and 1997 delineations primarily relied on vegetation to delineate the extent of wetlands on Terrace Point and assumed wetland hydrology and hydric soil conditions were present where there was a preponderance of wetland plant species. HBG's January 2004 report treated a preponderance of wetland plant species as presumptive evidence of the presence of wetland hydrology and hydric soil conditions, only to be rebutted where there was strong evidence of upland hydrology conditions.

I-4-34: The University has not received copies of any Terrace Point wetland delineations and investigations conducted by Phil Greer of Wetland Research Associates or Dr. Robert Curry, and HBG has advised that it also has received no such reports. Accordingly, the University is not in a position to comment on any findings that may be contained in these investigations.

I-4-35: HBG's January 2004 report followed ACOE and CCC wetland delineation guidelines with input from CCC staff. It is not appropriate to speculate what other third-party wetland delineations would be.

I-4-36: HBG's January 2004 report contains all pertinent summary data collected in support of the wetland delineation.

I-4-37: CEQA does not require that the Final EIR include all correspondence between the University and Coastal Commission or any other agency or entity. CEQA requires only that the Final EIR include comments and recommendations (or a summary of them) received on the Draft EIR and that the Draft EIR include, summarize, or otherwise respond to comments received through the scoping process. A summary of comments received on the CLRDP through the scoping process is provided on page 2-3 of the Draft EIR.

Agency correspondence regarding the CLRDP is encompassed within the public records of public agencies involved in the correspondence and is also part of the administrative record underlying the CLRDP.

I-4-38: The University and its wetlands biologist understand that California Coastal Commission (CCC) biologist John Dixon did not make a September 2000 preliminary determination of Terrace Point wetlands. Such a determination would be inconsistent with staff policy of adjudicating on the wetland determinations of others, rather than preparing the determination itself.

I-4-39: As noted on Draft EIR page 5-4, "other use" alternatives, such as a wetland reserve or agricultural alternative, are not considered reasonable alternatives to the proposed project because alternatives should be limited to those that meet most of the project objectives (CEQA *Guidelines* Section 15126[f]). Using the terrace portion of the project site as a wetlands habitat study area or for agricultural uses would not meet any of the objectives of the proposed project.

I-4-40: The comment questions the efficacy of the wildlife corridor. See the responses to comments SA-3-12, LA-2-14, and I-5-14.

I-4-41: The City's General Plan/LCP Environmental Quality/Biotic Resources Policies are discussed on Draft EIR page 4.4-72. The proposed CLRDP would not conflict with the General Plan policies for the protection of biological resources.

I-4-42: The commenter is referred to Draft EIR pages 4.9-15 through 4.9-58, which discuss consistency with the Coastal Act and the City and County LCPs, and to the responses to comments ORG-2-1 and SA-3-21.

I-4-43: The full text of the CLRDP policy statement on the use and alteration of marine resources was not cited in Section 4.4, Biological Resources, of the Draft EIR. The policy statement reads as follows:

“The biological productivity and the quality of coastal waters, streams, and wetlands appropriate to maintain the optimum populations of marine organisms and for the protection of human health shall be maintained and, where feasible, restored through among other means minimizing adverse effects of waste water discharges, controlling runoff, preventing depletion of ground water supplies and substantial interference with surface water flow, encouraging waste water reclamation, maintaining natural vegetation buffer areas that protect riparian habitats, and minimizing alteration of natural streams.”

The Draft EIR does not identify any significant effects on marine resources. It examines possible impacts on tidewater goby on page 4.4-61.

Potential effects of the seawater intake and discharge system are discussed in Section 4.9, Land Use and Planning, of the Draft EIR (page 4.9-24, discussion entitled “Protection from Hazardous Substances”; page 4.9-25, discussion entitled “Hydrology and Water Quality”). Section 4.8, Hydrology and Water Quality, of the Draft EIR states as follows: “The additional used seawater discharges that would result with the expansion of the seawater system described above, would require that a NPDES discharge permit be in place.” Since the publication of the Draft EIR, Long Marine Laboratory has been enrolled under a new California Regional Water Quality Control Board General Permit for Discharges from Aquaculture and Aquariums, General Permit No. CAG993003. The monitoring and reporting program under this permit requires the University to monitor and report quarterly. A monitoring program is in place. See also the response to comment SA-3-67. The CCC has reviewed the seawater intake and outfall installations at this location on several occasions, and has found them consistent with Coastal Act policies that protect marine resources. This EIR incorporates these previous CCC actions on this seawater system: CDP P-1859, CD-50-98, and ND 50-01. These CCC actions were informed by at least two environmental review documents for the project site that are cited in Section 4.4, Biological Resources, of the Draft EIR: (1) Draft EIR, Long Marine Lab Master Plan, 1993; and (2) Environmental Assessment, National Marine Fisheries Services Santa Cruz Laboratory, 1998).

I-4-44: The commenter has misinterpreted the provisions of PRC 30240. Its relevant provision is “Development in areas adjacent to environmentally sensitive habitat areas and parks and recreation areas shall be sited and designed to prevent impacts which would significantly degrade those areas, and shall be compatible with the continuance of those habitat and recreation areas.” This provision was strictly adhered to throughout the development of the CLRDP (for Younger Lagoon Reserve), and the determination of ESHA status for terrace areas (most specifically on page 4.4-57 of the Draft EIR, which repeats CLRDP Policy 3.4 on Protection of Environmentally Sensitive Habitat Areas).

Antonelli Pond has not been designated an ESHA, and thus PRC 30240 does not apply. Moreover, activities that would occur on the Marine Science Campus under the CLRDP would have no direct or indirect impact on Antonelli Pond, because the campus site is separated from the pond by intervening roads and other properties. The Draft EIR discusses potential project-specific and cumulative effects on sensitive habitat areas on pages 4.4-67 through 4.4-71 and 4.9-20 through 4.9-25. The Draft EIR examines growth inducement on page 4.12-21.

I-4-45: Section 4.5, Cultural Resources, of the Draft EIR indicates that, while no archaeological resources have been recorded on the project site, project construction could result in disruption or adverse effects on unknown archaeological resources or human remains (see Draft EIR page 4.5-7). The evaluation continues with a discussion of CLRDP Implementation Measure 3.9.1, Construction Monitoring, which states as follows:

Should archaeological resources be disclosed during any construction on the Marine Science Campus, all activity that could damage or destroy these resources will be temporarily suspended until the site has been examined by a qualified archaeologist and mitigation measures have been developed that address the impacts of the project on archaeological resources. Such mitigation measures shall be reviewed by the State Office of Historic Preservation and approved by the Executive Director of the California Coastal Commission.

This measure is sufficient to address the potential impacts on archaeological artifacts and habitation sites that are of concern to the commenter. Continual onsite supervision by a licensed archaeologist or other qualified person during construction, as suggested by the commenter, would exceed the requirements of the Coastal Act and standard CEQA practice for properties such as the project site, where no archaeological resources have been recorded. Instead, the CLRDP provides for archaeologist supervision if resources are found. Impact 4.5-1 and the accompanying Project-Specific Mitigation Measure 4.5-1 of the Draft EIR (page 4.5-8) identify the additional possibility of discovering Native American burial sites and the specific procedures that would need to be followed in that event.

I-4-46: Please refer to the Draft EIR (page 4.6-6) for a detailed discussion of coastal bluff retreat in regards to the proposed CLRDP. Bluff retreat in the Santa Cruz Mudstone, a siliceous sedimentary rock that is relatively resistant to wave attack, is approximately 0 to 0.2 feet per year as determined by a previous geologic study. At an average rate of 0.2 feet per year, the seacliff retreat would be 10 feet over 50 years and 20 feet over 100 years. The recommended 50-year setback is 30 feet and the 100-year setback is 50 feet. These setbacks provide a factor of safety

over the average retreat rate to account for potential earthquake ground shaking. Foxx, Nielson and Associates (FNA) provided these recommendations in 1992. As part of this EIR, a Certified Engineering Geologist (Hoexter Consulting) reviewed the FNA 1992 report and concurred with its findings and conclusions regarding retreat rates and setbacks. Furthermore, no reinforcement of the bluffs is anticipated based on the conservative estimate of bluff retreat.

I-4-47: It is possible that a tsunami could inundate YLR. However, as stated in the Draft EIR (page 4.8-37) the Marine Science Campus is 40 feet above mean sea level. It is not likely that the wave run-up generated by a tsunami would reach the project site and result in a significant impact related to inundation.

I-4-48: Section 4.6, Geology and Soils, of the Draft EIR (page 4.6-21) addresses soil erosion and loss of topsoil caused by short-term construction activities and concludes that standard engineering practices would require winterizing construction sites and protecting exposed soil during heavy rainfall. Section 4.8, Hydrology and Water Quality, of the Draft EIR (pages 4.8-29 through 4.8-32) addresses short-term erosion and sedimentation occurring during construction projects and the control of the erosion by through the implementation of Storm Water Pollution Prevention Plans (SWPPP).

I-4-49: As discussed in the Draft EIR (pages 4.7-10 through 4.7-12) and the response to comment ORG-2-12 above, previous soil quality assessments found that constituents of organochlorine pesticides detected in the shallow onsite soils were well below the residential land use EPA-PRGs. The conservative application of the CalTOX Multimedia Exposure Model in 1997 and again in 2002 indicated that residual pesticides measured in the soil at the Marine Science Campus pose a level of risk to human health that is well below normally accepted values. As discussed in the response to comment ORG-2-12, these soils can be disposed and in some cases reused provided UCSC complies with applicable state and federal regulations. The effect of the residual pesticide concentrations is considered less than significant by the Draft EIR.

As discussed in the Draft EIR (page 4.3-17), acute and chronic exposure levels of toxic air contaminants (TACs) from fugitive dust were estimated for those substances with acute or chronic health effects. Contaminants contained in the soil with potential acute health effects include the pesticides DDT, DDD, and DDE, arsenic, and nickel. Based on the highest readings of these substances in the soils analysis, acute exposure levels at offsite receptors were calculated by conducting dispersion modeling of the pesticide contaminated fugitive dust. The maximum calculated concentrations were compared to acceptable exposure levels, as established by the California Office of Environmental Health Hazard Assessment (OEHHA), and are reported in the Draft EIR on Table 4.3-3. The table shows that the maximum acute exposure levels of TACs from fugitive dust during construction activities are well below the acceptable threshold levels. The potential exposure to TACs during construction is therefore considered a less-than-significant impact.

I-4-50: Other than the National Pollutant Discharge Elimination System (NPDES) permitted seawater discharge, the Marine Science Campus does not discharge wastewater. All wastewater is managed by the City of Santa Cruz's sanitary sewer system. Implementation Measure 7.1.10

of the CLRDP ensures that the University would continue to discharge wastewater through the municipal system.

I-4-51: The lack of a discussion or lack of a proposed plan for wastewater reclamation does not violate water quality standards or waste discharge requirements. Marine water quality standards are discussed on Draft EIR page 4.8-13. Policy 7.1 of the CLRDP, Productivity and Quality of Coastal Waters, encourages wastewater reclamation (CLRDP, page V-31).

I-4-52: As discussed in the Draft EIR (page 4.8-18), the Stormwater Concept Plan is designed to accomplish five key objectives pertaining to hydrology and water quality. The plan will (1) maintain predevelopment peak flows under post-development conditions, (2) provide for stormwater treatment, (3) incorporate maintenance and monitoring to ensure that the drainage system operates effectively to provide effective control of water quantity and quality, (4) recognize the need to maintain groundwater recharge at pre-CLRDP levels to the maximum extent practicable, and (5) provide mechanisms to correct existing erosion and sedimentation problems in YLR caused by drainage from the terrace portion of the site. In addition, the Stormwater Concept Plan identifies an approach and provides guidance for maintaining peak stormwater flows, improving existing drainage deficiencies, and improving water quality resulting from CLRDP development.

Adverse water quality effects, and in particular, non-point source pollutants, are discussed in the Draft EIR (page 4.8-12, 4.8-24 through 4.8-27). Also, as discussed in the Stormwater Concept Plan (page 1), urban runoff (non-point source pollution) is now recognized as one of the leading causes of water quality impairment in the United States. Runoff from the Marine Science Campus development would drain to wetlands, Younger Lagoon, and the Monterey Bay National Marine Sanctuary. Given the ecological importance of these waters, runoff water quantity and quality from the proposed development has been made a critical component in the site design. The Stormwater Concept Plan has been designed to address these issues. The Draft EIR (pages 4.8-24 through 4.8-27) discusses water quality and analyzes impacts on surface water from development of the entire development project and the individual near-term projects. The Draft EIR section addresses the mitigations that are built into the project to reduce potential surface water contaminants that would drain from the proposed additional parking lots. Rather than proposing the exclusive use of filters and traps, the CLRDP would use a series of vegetated filter swales and strips, wet ponds, and engineered stormwater treatment systems. Through the implementation measures prescribed by the CLRDP and the stormwater controls under the Stormwater Concept Plan, water quality standards would be met.

I-4-53: The impacts on groundwater resources are adequately addressed in the Draft EIR (page 4.8-27). Development under the CLRDP would not draw water from wells on the site and would receive water supply from municipal service. The development would not interfere with recharge because the CLRDP includes policies and implementation measures that require that runoff from developed surfaces be collected and directed into swales and ponds so that it can recharge the groundwater under the site. The commenter does not provide support for the assertion that water quality standards and waste discharge requirements are violated. The Draft EIR analyzes these questions and finds no such violations (pages 4.8-24 through 4.8-27). The

Draft EIR conclusion concerning a significant impact on water supply relates to the adequacy of supply and is unrelated to water quality or waste discharge. The Draft EIR does include mitigation measures to minimize the increase in the consumptive use of water on the Marine Science Campus under the CLRDP (see Draft EIR pages 4.16-17 and 4.16-18).

I-4-54: The Draft EIR includes Mitigation Measure 4.16-1a to reduce the CLRDP's overall water demand in light of limited water supplies, although the reduction in water use would not reduce impacts related to the CLRDP's water demand to less than significant. This measure is not voluntary. Moreover, Mitigation Measure 4.16-1c requires all non-UC entities that may operate on the site under future project conditions to adhere to the same standards, namely, the requirement to install low-flush and low-flow fixtures. Similarly, this measure is also required and not voluntary. Mitigation Measure 4.16-1b provides for discretionary review and voluntary compliance with future water conservation policies adopted by the City of Santa Cruz, because as a state agency the University of California is exempt from local regulations.

The Draft EIR (page 4.16-17) states that the City of Santa Cruz "is in the process of examining new water supply alternatives to address the deficit which would likely worsen with the continued growth in water demand. A list of projects has been proposed but no preferred project has yet been chosen...the City is considering the development of a desalination facility and/or wastewater reclamation system." The City is currently preparing an EIR on its recently completed Integrated Water Plan, and would also undertake environmental review of any resulting water supply expansion projects. The City's EIR has not yet been prepared, however, and in the absence of such analyses, it is conservatively assumed that one or more of these water supply projects could cause significant adverse effects on the environment.

I-4-55: The Draft EIR (pages 4.8-6 through 4.8-11) discusses the regional and site-specific surface water hydrology and describes in detail how surface water finds its way from the uplands to the north, across the terraces, and to the ocean. The discussion of hydrologic and drainage characteristics on the Marine Science Campus divides the property into 12 basins and describes the characteristics of each basin. The Draft EIR text describes in detail how surface water is conveyed through creeks (i.e., Wilder Creek and Moore Creek) and eventually flows into the ocean. The comment statement that flow from the north "can be discerned as almost a sheet of water after heavy rains and migrates toward the ocean for days after heavy rain" is partially incorrect. Water flows from the uplands to the ocean not as a sheet of water but is conveyed through the various creeks. Once on the Marine Science Campus, water flows through the basins, drainage ditches, and outfalls to reach YLR or the ocean.

The Stormwater Concept Plan proposed with the CLRDP is designed to manage storm flows on the site under the proposed development scenario and reduce adverse environmental effects related to stormwater and flood flows altered by the proposed CLRDP development. The Stormwater Concept Plan is described in detail on Draft EIR page 4.8-18. Proposed plans to manage and accommodate stormwater flows during the early stages of the building program are described in the Draft EIR on pages 4.8-20 through 4.8-22. The impacts from flooding are discussed in detail in the Draft EIR on pages 4.8-32 through 4.8-36.

I-4-56: As indicated in Table 4.9-1 (Draft EIR, page 4.9-7), the public access provisions in the CLRDP have been assessed as consistent with the California Coastal Act. As stated in the table, “due to existing public safety and security concerns and the need to protect sensitive coastal habitat, no formal coastal access to the beach below the bluff or through YLR would be provided (see Draft EIR Table 4.9-1, Coastal Act Policy Number 30212[a]).” No mitigation measures are provided in the Draft EIR because no significant impacts on public access are identified. See also the response to comment SA-3-35.

I-4-57: As stated in the Draft EIR on page 4.12-21, the population associated with the proposed Marine Science Campus would represent less than two percent of the population of the City of Santa Cruz and less than one percent of the population of Santa Cruz County. This does not represent substantial population growth and is therefore not considered to be growth-inducing. The proposed housing would reduce the local housing demand that would otherwise be associated with new employees and students. Furthermore, as stated in the Draft EIR on pages 6-1 and 6-2, the proposed project would cluster complementary uses; retain open space, habitat areas, and buffers near adjacent agricultural uses; and limit the size of infrastructure to serve only the needs of the campus. Please also see the response to comment SA-3-91. Consistency of the support housing with Coastal Act policies is discussed in the Draft EIR on pages 4.9-30 – 4.9-32.

I-4-58: Please see the response to comment I-4-1.

I-4-59: Please see the response to comment SA-3-75.

I-4-60: The Draft EIR, on pages 4.12-11 – 4.12-13, describes existing and expected future housing market conditions in the City of Santa Cruz and Santa Cruz County, which are characterized by high and increasing housing prices, low rental vacancy rates, and high rents. These conditions are the consequence of strong demand and limited supply. Housing such as that represented by the Pacific Shores project on Mission Street near Shaffer Road (206 units) is included in the estimates of housing supply for the City of Santa Cruz, as are an estimated 80 units at the Marine Science Campus. Although there has been recent easing of rental housing demand, likely due to the effects of the economy and downsizing in the Silicon Valley area, this trend does not preclude the need for more rental housing within the City of Santa Cruz. In this coastal environment, with very little land available for new housing, every indication is that there will be continued pressure for new housing due to the growth of the University and the other regional areas of growth. The housing element is included in the CLRDP to provide the opportunity for a fully integrated learning and research community. It also reduces the effect of UCSC students and employees on the local housing market that is documented in the Draft EIR (pages 4.12-9 – 4.12-11), thereby reducing upward pressure on prices and rents and freeing up housing supply for others. Please also see the response to comment SA-3-73 and the response to comment ORG-3-18.

I-4-61: As explained in the response to comment ORG-3-18, onsite housing is planned as an integral part of the research and educational community; this objective cannot be achieved by substituting housing on the main campus. The onsite housing would be provided for visiting scientists, teachers, and students; graduate students; and new faculty and researchers affiliated

with the Marine Science Campus. Since the majority of work/study activities are located at the Marine Science Campus, the greatest trip reduction benefit occurs by locating housing at the Marine Science Campus instead of the main campus. As explained in the response to comment ORG-3-21, however, the University will continue to construct new housing on the main campus as needed, to the extent that it is consistent with the Long Range Development Plan for the main campus. It is likely that some of the Marine Science Campus students, faculty, and staff will live in this housing. As described in page 4.15-24 of the Draft EIR, the University would expand the existing shuttle service between the main campus and the Marine Science Campus as demand warrants (CLRDP Implementation Measure 5.7.2).

I-4-62: The Draft EIR assesses public service impacts based on the significance criteria described on page 4.13-1 of the Draft EIR, namely, if a project would “result in substantial adverse physical impacts or physically altered governmental facilities to accommodate the project (i.e., in order to maintain acceptable service ratios, response times, or other performance objectives) for any of the following public services: fire protection, police protection, schools, and other public facilities.” The Draft EIR concludes that the project would not result in the need for new or physically altered governmental facilities to serve the project based on an analysis of the project and consultation with applicable service providers. In addition, the CLRDP contains a policy that all utility lines would be sized only to accommodate the uses proposed as part of the CLRDP, in order to avoid growth-inducing impacts. As such, because no significant impacts are identified, no mitigation measures for public service impacts are required.

Relative to the environmental effects associated with the provision of utilities and infrastructure to the site, the Draft EIR considers the environmental setting, i.e., “baseline conditions,” as they existed in 2003. The widening of Mission Street was completed to address existing and projected operational deficiencies related to left-turning movements. The improvements were planned and implemented prior to the completion of the Draft EIR transportation analysis. Thus road widening and existing demands at the Santa Cruz Wastewater Treatment Plant and other past “incremental development” on the site are considered part of the existing environment. As required by CEQA, in assessing an impact, a Lead Agency should “normally limit examination to changes in the existing physical conditions in the affected area as they exist at the time the notice of preparation is published...” (CEQA *Guidelines* Section 15126.2).

I-4-63: Section 30253.4 of the California Public Resources Code states that “New development shall minimize energy consumption and vehicle miles traveled.” As stated in the Draft EIR (page 4.15-20), the CLRDP proposes measures as part of the project to reduce vehicle miles traveled, such as onsite housing and implementation of a transportation demand management program designed to achieve a 30-percent reduction in person trips made by automobile. The Draft EIR (page 4.16-6) also states that the CLRDP would be required to meet the standards included in the California Energy Security Reliability Act and Title 24 to make “maximum feasible” reductions in unnecessary energy consumption. The University is pursuing sustainability on a system-wide basis through its Policy on Green Building Design and Clean Energy Standards. Given the fact that these measures are included as part of the project, and that the Draft EIR did not identify any significant energy impacts, no mitigation is required.

I-4-64: Neighborhood traffic impacts are presented on pages 4.15-35, 4.15-45, 4.15-58, and 4.15-69 of the Draft EIR. See also the response to comment I-4-67 below.

I-4-65: The University's vision for such a facility is one that would serve the casual lunch needs of individuals, but would be able when needed to serve food for a large group such as may be attending an all-day meeting or workshop on the site. The traffic analysis did not assume any reduction in trips based on the dining hall reducing the need to leave for meals. To the extent that there is such a reduction, there would be fewer trips than assumed in the traffic analysis. However, the traffic analysis only focused on AM and PM peak hour travel; most of the trip reduction associated with use of the dining hall would be during the lunch hour.

I-4-66: The quantification of the benefit of onsite housing is presented in the third complete paragraph on page 4.15-27 of the Draft EIR.

I-4-67: Mitigation measures were identified to address specific anticipated impacts. The extension of Shaffer Road is not a proposed mitigation measure for the project.

A Traffic Infusion on Residential Environments (TIRE) analysis (see page 4.15-35 of the Draft EIR) was used to evaluate project impacts on three nearby residential street segments with housing that faces the street (Delaware Avenue between Seaside Street and Surfside Avenue, Western Drive between Western Court and Monarch Way, and Bay Street between Escalona Drive and Kenneth Street). As shown in Table 4.15-70 of the Draft EIR, the effect of increased daily traffic on Delaware Avenue from long-term development under the CLRDP on activities such as walking, cycling, and playing, or maneuvering an auto out of a residential driveway, would not be noticeable to residents. Furthermore, as discussed on page 4.15-36 of the Draft EIR, based on field review of the street segments described above, there are no operational or design problems identified that could be exacerbated with an increase in traffic volume. Therefore, traffic calming measures are not warranted as a mitigation measure for project-related traffic.

Use of public transportation by all Marine Science Campus visitors and users is not practical and would not be consistent with other development in the city. However, as detailed on pages V-24 through V-26 of the CLRDP and pages 4.15-22 through 4.15-24 of the Draft EIR, the University would implement a number of measures to encourage alternatives to the single-occupant vehicle and thereby reduce vehicle trips to the project site. The measures include the regulation of parking and promotion of carpools, vanpools, walking, and use of bicycles and public transit. With similar transportation demand measures in place, over 40 percent of trips to the UCSC Main Campus are not made in single-occupant vehicles. The University considers prohibition of cars onsite to be overly restrictive; it is not possible for public transit to satisfy all transportation needs of the Marine Science Campus population.

I-4-68: The proposed project (i.e., CLRDP) is the long-range development of the Marine Science Campus over a 20-year period. Since other land development will occur in the City and surrounding area during that time, traffic from those developments will be added to roadway network using available capacity and contributing to degraded roadway operations. The

unacceptable levels of service at the intersections where the proposed project would have significant impacts result from past and projected growth throughout the area, not just from the project. CEQA requires that the mitigation measure must be “roughly proportional” to the impact of the project (CEQA *Guidelines* Section 15126.4[a][4][B]). As shown on Tables 4.15-14, 4.15-8, and, 4.15-21, the project would only contribute a small percentage (less than 6 percent) of the total traffic at each of the affected intersections.

I-4-69: Mitigation measures for all potentially significant impacts of the project are identified in the Draft EIR following the corresponding statements of impact. See Draft EIR pages 2-8 through 2-24 for a summary of mitigation measures.

I-4-70: The University does not propose to provide a “self-contained community” or to eliminate offsite trips entirely. As discussed in the response to comment ORG-3-18, the onsite housing would provide the opportunity for a fully integrated learning and research experience. It would reduce the University’s burden on the local housing market and would also reduce the number of peak hour trips generated by the project, as at least one member of each onsite household would not have to commute to work. Regarding the suggestion that the Marine Science Campus population be housed on the main campus, please see the response to comment ORG-3-21.

I-4-71: Transit access and service, including the potential extension of service within the project site, are discussed on page 4.15-37 of the Draft EIR. The CLRDP includes several measures to promote transit use (Implementation Measures 5.7.1 through 5.7.3, CLRDP page V-26). Parking fees collected at the Marine Science Campus would help fund the cost of faculty and staff use of public transit and could also support expanded shuttle service between the Marine Science Campus and the UCSC main campus.

I-4-72: The CLRDP provides for pedestrians and bicycles on the campus streets, and also includes a network of pedestrian trails for daily use by site faculty, staff, and students and for visitor use for coastal access. As shown on Figure 6.5 of the CLRDP (page VI-5), the standard campus street design includes an 8-foot-wide sidewalk. Figure 5.5 of the CLRDP (page V-28) shows the proposed network of public trails on the site, and trail design is discussed on pages VI-7 and VI-8 of the CLRDP. As discussed on page 4.15-36 of the Draft EIR, bicyclists would share the 22-foot-wide campus streets with motor vehicles. Although the campus streets would not include striped bike lanes, the traffic volumes and travel speeds are expected to be relatively low, so sharing the road with vehicles is not anticipated to result in any increased hazards for cyclists. The controlled service access illustrated on Figure 3-8 and the public trails shown on Figure 3-9 also illustrate the onsite bicycle and pedestrian facilities.

I-4-73: Please refer to the response to comment I-4-54 with regard to additional sources of water. As indicated in the Draft EIR (pages 4.16-18 and 4.16-19), “...it is expected that future growth, including growth under the CLRDP, will be accommodated by the existing wastewater treatment facility, and as such, no cumulative impact associated with improvement to wastewater treatment facilities is expected.” As the Draft EIR indicates no significant project or cumulative impacts related to wastewater treatment, no mitigation is required.

I-4-74: The Draft EIR acknowledges that water supplies in the City's service area are insufficient to reliably serve future growth. The Draft EIR therefore indicates that the project in conjunction with background population growth would result in a significant unavoidable cumulative impact related to the future water supply deficit in the region.

I-4-75: The Draft EIR (page 4.16-5) identifies the Resource Recovery Facility (RRF) as the local landfill that would serve the project site. The Draft EIR further states that the CLRDP would generate approximately 471 tons of solid waste annually and, according to the Santa Cruz Department of Public Works, RRF's capacity is anticipated to be adequate to serve the CLRDP's entire development program and other cumulative development through the year 2038.

I-4-76: The commenter indicates that the alternatives analysis does not give adequate consideration to Coastal Act standards, but fails to identify the standards in question. Chapter 5 of the Draft EIR reflects the University's preliminary consideration of seven alternatives and detailed consideration of five alternatives. Each of the five alternatives is evaluated in light of impacts on aesthetics, agricultural and cultural resources, hydrology, biological resources, and other factors reflecting the full scope of Coastal Act policy concerns. An alternative that developed uses other than educational and research facilities on the project site would not meet the objectives of the proposed project (see also the response to comment I-4-39). Regarding Coastal Act standards generally, see the response to comment ORG-2-1.

I-4-77: The project's relationship to Section 30250 of the Coastal Act is discussed on Draft EIR pages 4.9-30 to 4.9-31. Section 30250 applies to a limited range of development, not including educational facilities. Even so, as explained on Draft EIR page 4.9-31, the site of the educational facility covered by the CLRDP is contiguous with developed land on the north and along most of the eastern boundary. As shown on Figure 3-10 of the Draft EIR (page 3-31), utility connection points are available at the site boundary, and the site is already served by University and City fire and police services and is within the attendance boundaries of existing schools. The plan thus carries out the policy of Section 30250.

I-4-78: Regarding coastal-dependent and coastal-related land uses, see the responses to comments SA-3-73 and ORG-2-1.

I-4-79: The commenter does not provide any reasons to explain why he thinks the mitigation measures are inadequate. The mitigation measures in the Draft EIR and implementation measures in the CLRDP are standard, well-tested measures that are known to avoid or reduce environmental impacts. In those few instances where mitigation measures were found to be infeasible, the Draft EIR concludes that the remaining impact would be significant and unavoidable.

I-4-80: Please see response to comment ORG-2-16 which explains that the adoption of the Mitigation Monitoring Program is a legal commitment on the part of the University that the proposed mitigation measures will be funded and implemented.

I-4-81: See the responses to comments ORG-3-28 and ORG-3-30.

I-4-82: The additional people living in Santa Cruz because they move to the city to work at the Marine Science Campus would represent only a small percentage (less than two percent) of the total population living in the city in 2000. As stated in the Draft EIR on page 4.12-21, this does not represent substantial population growth or a concentration of population. Considering Santa Cruz County as a whole, the population associated with the Marine Science Campus represents an even smaller contribution to the total. No population or housing mitigation is required or proposed. The housing proposed onsite would reduce the demand for housing elsewhere in the City of Santa Cruz and Santa Cruz County that would otherwise be expected from people moving to the city or county to work at the Marine Science Campus. The Draft EIR (page 6-2) concludes that the net remaining housing demand associated with students and other Marine Science Campus employment would not represent a substantial addition to the need for local housing production.

I-4-83: As described in the Draft EIR (page 4.14-4), the CLRDP's entire development program would include onsite recreation opportunities for students, staff, and site visitors; facilities would consist of paved recreation courts and a trail network with overlooks. Docent-led tours would also be available to the public.

The Draft EIR (page 4.14-7) indicates that implementation of the CLRDP's entire development program would generate an additional average occupancy of 888 people (for a total campus population of about 1,313 people), some of whom may use park and recreation resources. The Draft EIR further states that increases in both onsite and future regional populations would not result in a significant impact on existing parks such that substantial deterioration of park and recreation facilities would occur, nor would implementation of the entire CLRDP result in the need to expand recreational facilities or to provide altered governmental facilities to accommodate such an expansion.

As stated in the Draft EIR and in the response to comment PH-6-4, access restrictions currently exist on the site because of the site's sensitive biological areas. Existing hiking, nature study, bike-riding, and recreational uses would not be eliminated by the project; instead, such uses would be regulated by policies in the CLRDP, building on policies included in the *Interim Access Plan for the Marine Science Campus* and *Younger Lagoon Beach/Wetland Area Management and Access Plan*. While some activities and areas on the site may be restricted for reasons described in the Draft EIR (e.g., protection of sensitive habitat areas, security, and safety), these recreational opportunities would not be eliminated.

Demands for park and recreational facilities in the City of Santa Cruz would be associated with probable areawide growth through the year 2020, and the Draft EIR (page 4.14-9) indicates that such demands would be offset by the provision of either parkland dedication or the payment of in-lieu fees.

Thus, above and beyond the recreational elements proposed as part of the CLRDP, no mitigation is required, because no significant recreation impacts are identified.

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SANTA CRUZ, CALIFORNIA 95064

18 March, 2004

Environmental Assessment Group
 University of California
 515 Swift Street
 Santa Cruz, CA 95060

UCSC

MAR 19 2004

Campus & Community Planning

Dear Colleagues,

I have reviewed the current draft EIR for the UCSC Marine Science Campus (MSC) Coastal Long Range Development Plan (CLRDP) and I have been involved in the past in discussions of the project and its impacts. Overall you have done an excellent job especially integrating the Younger Lagoon Natural Reserve (YLR) into these documents. This is especially difficult given that the administrative structure of YLR as a UC Natural Reserve System (NRS) reserve requires a separate management planning process for the YLR although it is actually part of the MSC. I also applaud the detailed work that has gone into dealing with the very difficult issues of drainage, site layout, construction impacts, and ongoing project impacts.

I am commenting on CEQA issues as I understand them and also in my capacity as director of the UCSC Natural Reserves. NRS is a trustee agency under CEQA and my responsibilities require that I consider impacts that would diminish the value of YLR as an NRS natural reserve for use for teaching and research as well as impacts that have the potential to diminish the ecosystem of YLR as a whole.

In the near future I am committed to a revision of the YLR management plan that will reflect how YLR will respond to impacts from and mitigation for all projects identified in the developed portion of the MSC. Personnel from the YLR will be pleased to accommodate monitoring, restoration, overlooks, and other elements of the CLRDP, the EIR, and specific project plans, and we assume that funding for such work will be explicitly identified within the final approved documents as appropriate. To make that clear I request that an additional statement be added in Chapter 9 of the CLRDP, perhaps as 9.2.4, to clarify the need for the project to provide capital investment and ongoing funding through YLR for any requirements placed on us as a result of this CLRDP and EIR. In addition, I ask for an explicit commitment to fund any additional monitoring or mitigation required as subsequent and specific projects are approved.

The YLR management plan has species lists that include information not included in the survey data for the CLRDP. For example, the San Francisco dusky-footed woodrat is known to have been present in the reserve from our former mammal surveys and the CLRDP and EIR do not reflect an awareness of that. Our survey data should be noted and referenced in the database. YLR staff will make new information available to the UCSC planning department as it comes in for amendment to the CLRDP.

1

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I concur with the decision that the project will not result in a take of Red-Legged frogs except as they are hit on the road during the wet season when they are moving across the coastal terraces.

3

I have several concerns that in my opinion are not completely addressed in the CLRDP or the EIR. I am also concerned about some issues that will emerge in the course of site specific planning for each project in a context of either specific impacts or cumulative impact at build out. I understand that there are three levels to the analysis of the significance of impacts. One in the CLRDP in which components of the projects are described with mitigation for possible impacts included. Another is in the EIR that defines and outlines mitigation for additional impacts (as listed in Table 2-1). The third level will not appear until each specific project plan is proposed and analyzed. My analysis apply to all of these stages and is based on the concern that without some additional mitigation the finding of "less than significant" would not apply. My specific concerns include:

DRAINAGE: Overall the planning for drainage is quite good. I have every confidence that the calculations of increases for the 25-year precipitation event are accurate. I suggest that the EIR also include an analysis of a 100-year rainfall event, as is usually done for the UCSC campus proper. It is extremely important that changes to the levels of annual variations in drainage, especially increases in peak flows and hence erosion potential. It is also vital that increased levels of contaminants from project sites be carefully contained. At the present time, the YLR has excessive erosion problems with two of the drainages that drain the MSC built areas and also contamination loads from the agriculture to the north and west. I am concerned that additional runoff from the increase in impermeable surfaces and the increase in hydrocarbons and other chemicals associated with developed areas will exacerbate these problems and request this issue be more clearly addressed in the CLRDP or EIR as to how significant impacts will be avoided.

4

5

Our lagoon currently supports a breeding population of the federally endangered tidewater goby and a small population of the 3-spined stickleback. Not only is it vital to keep water in the lagoon but also it is very important that the sandy bottom be maintained as breeding habitat for the goby and that contaminant loads not be increased or added to. Changes in peak flow and sediment load might cause problems in changing the character of the bottom. Increased areas of impermeable surface and developed, landscaped areas also have the potential to add contaminants to the lagoon. It is probably good that the lagoon undergoes fluctuation of temperature and salinity because a more stable system could lead to the loss of the goby if competitors or predators could move in. But addition of contaminants could raise the levels of chemical pollution in the lagoon above a threshold that the fish can tolerate and that would constitute a significant impact.

6

The EIR seems to say that the designed drainage basins and swales could intercept approximately 80% of the contaminant (particulate?) load, thus implying that 20% will enter the lagoon. It is also a given that agricultural runoff from the Brussels sprout fields on the north and west input a lot of harmful chemicals into the lagoon. We have worked with the property owners and farmers in the past to create buffer areas. Possibly UC could obtain a lease on a strip of buffer land and increase the interception of both sediment and chemicals into the lagoon as mitigation for the amount of increased contaminant load (20% of the total generated) that is predicted to run into the lagoon. My concern is based on a recent survey that indicated that the stickleback population is small, possibly indicating a marginal condition for maintaining the current level of biodiversity in the lagoon. I also understand that good retention or removal of contaminants and sediment require ongoing maintenance of the developed areas and I request that we assure funding be provided for this and other needed and ongoing costs to avoid future significant impacts.

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9

Since only a prototype site plan (Figure 3-7) has been provided it is premature to comment on alternative layouts for the projects. In that plan though I note an outdoor research area at the proposed sea otter facility and wonder if seawater use there is anticipated. This could cause impacts to the vegetation on the reserve slopes below that facility such as we once suffered during a salt-water spill from the old abalone plant. I suggest that a facility with lower potential for impacts be placed against the reserve boundary. If this is not feasible I request that the CLRDP/EIR include language for the containment of seawater spillage due to overflows or leaks such that they do not drain to the reserve.

10

Our revision to the YLR management plan will address issues related to the tidewater goby and stickleback. For this CLRDP and EIR I request that monitoring of the lagoon waters be added to the monitoring requirements on the drainage. I think that monitoring the lagoon 4 times per year plus first flush would give us the data needed to anticipate and deal with any problems and prevent significant impacts. If information were needed about the source of runoff, then additional monitoring stations would have to be employed. Monitoring should begin immediately as we will need a baseline against which to compare post project levels.

11

My final comment about drainage is that when drainage swales that currently conduct water into the lagoon need to be upgraded in such a way that removes and/or damages native vegetation restoration will be needed. I anticipate that this issue will need to be addressed in general as well as on a project-by-project basis. The revised management plan for YLR will address the generalities of restoration in lagoon habitats. But I request that an acknowledgement of this need be written into the CLRDP or EIR.

12

WILDLIFE CORRIDOR: The current plan and several earlier plans have addressed the issue of connection of the lagoon to other natural systems so that various species, especially mammals and birds but also reptiles, amphibians, insects, and plants can reach the reserve from, say the Moore Creek corridor as mentioned. One concern is that the connection from YLR to Moore Creek goes via Antonelli's Pond through private property. It is vitally important that such a connection be maintained if significant impacts are to be avoided. It has been shown that the presence of mid-sized mammal predators such as the gray fox, coyote, and bobcat have a positive effect on the biota of habitats like YLR in that they prevent takeover by red fox (which come from Natural Bridges State Park and the De Anza trailer park) and feral or roaming house cats. These latter species devastate the breeding bird populations. In addition the loss of species inputs would eventually decrease the overall species diversity of the reserve. I realize that UC cannot compel the developer of private land to include the corridor but the EIR could and should make a very explicit statement about the need to do so to avoid significant and cumulative impacts.

13

It has been shown again that Wildlife Corridors need to be wide enough and well enough vegetated to provide passage for native species in contrast to providing such passage for domestic dogs and cats. (Hilty, Jodi A. & Adina M. Merenlender. 2004. use of Riparian Corridors and Vineyards by Mammalian Predators in Northern California. *Conservation Biology*. 18 (1): 126-135.) In that study corridors that were an average of approximately 20 meters wide (on either side of riparian systems) were considered marginal and corridors of an average of 679 meters wide showed a great increase in passage by native species and a reduced passage by dogs and cats. The CLRDP/EIR should explicitly state a need to evaluate our corridor in the context of these and other data. We also need a statement about providing a safe way to cross Shaffer Rd., presumably via a properly designed underpass, if that route is opened to traffic.

14

When combined with the MSC projects, the cumulative impacts of a lack of a wildlife crossing of Shaffer Rd. if it is opened to traffic and of a lack of an effective connection across the private land to Moore Creek would constitute a significant and cumulative impact.

15

Finally the CLRDP/EIR contain detailed plans for vegetation restoration and management in the non-built portions of the project site. We strongly support these measures, as they will assure that feeding habitats remain available to reserve species, especially breeding birds.

16

IMPACTS OF BUILT AREAS: The CLRDP addresses the impacts of built projects (buildings, parking lots, infrastructure, noise, night lighting, and others). It will be important that project planners and their clients be fully apprised of design constraints. These include but are not limited to noise caused by operating building systems, shielding lights from shining into the reserve at night, keeping noisy operations away from reserve boundaries or providing shielding between such activities and the reserve, and others. Our CLRDP/EIR need to firmly and clearly state that project planners and their clients need to design appropriate facilities without significant impacts to the reserve and its flora and fauna. I cannot emphasize enough the severity of the impacts of lights at night and ongoing industrial noises on biodiversity. They can be highly significant.


17

Additional impacts from the operations of the projects also need to be carefully screened for and mitigated. For example a no (roaming) pets rule on the property is needed. No herbicides or pesticides should be used in the landscaping without an approved management plan. No hybrids of native plants or invasive non-natives should be used. These and other elements implied or explicitly stated in the CLRDP/EIR need to be carefully monitored throughout the life of the facility.

18

YLR staff will work with LML and planning staff to prepare plans for the various projects as they come on line. Early consultation is the best way to identify the elements that need attention early in the planning process. We will do our best to assure that the Marine Science Campus becomes the best it can be.

Sincerely yours,



Margaret H. Fusari
Director, UCSC Natural Reserves
Manager, Younger Lagoon Reserve

cc: Violet Nakayama, UC/NRS
Don Croll, Faculty Advisor, Younger Lagoon Natural Reserve

COMMENT LETTER I-5: MARGARET H. FUSARI

I-5-1: An EIR is not required to explain mitigation measure funding. Adoption of a Mitigation Monitoring Program is a legal commitment that the mitigation measures will be funded, implemented, and monitored for compliance. However, because YLR is under the oversight of the UC Natural Reserve System and is a separate management unit from UC Santa Cruz, the campus will work with YLR to ensure that maintenance and monitoring burdens placed on YLR as the CLRDP is implemented are funded by the campus. A statement in the CLRDP is not considered necessary.

I-5-2: The Draft EIR (page 4.4-41) states that potential habitat for the dusky footed woodrat exists in YLR and in Table 4.4-5 notes that the Draft EIR assumes that the species is present in that area. The Draft EIR (page 4.4-66) further notes that impacts on this species would be less than significant because the species habitat in YLR would not be directly disturbed and would also be shielded from indirect impacts.

I-5-3: Comment noted.

I-5-4: According to the Stormwater Concept Plan, the existing drainage discharge points will be retained and improved where necessary to accommodate the 100-year storm event. As on the UCSC Main Campus, the increased discharge for a 100-year storm event will be analyzed for projects proposed under the CLRDP.

I-5-5: Note that the Stormwater Concept Plan addresses peak flows. Detention facilities are proposed in each drainage basin to detain runoff so that post-development peak flows are no higher than the pre-development peak flows, and in fact could potentially be lower than pre-development flows.

I-5-6: The Draft EIR (page 4.8-24, under “Water Quality”) addresses increased impervious surfaces and increased pollutant loads in surface water runoff. In this discussion, the Draft EIR describes each of the proposed Best Management Practices (BMPs), including those that would contain and treat increased pollutant loads in the surface water runoff. Erosion and sedimentation controls, including repair of existing erosion problems, are discussed in the Draft EIR (see “Erosion and Sedimentation Measures Due to Altered Drainage Pattern,” page 4.8-29). Implementation measures provided by the CLRDP for water quality and drainage (see Draft EIR pages 4.8-22 through 4.8-24) describe the actions that UCSC would take under the CLRDP to manage stormwater, reduce landscaping chemicals, manage wastewater, maintain the stormwater system, reduce pollutants in stormwater, and improve discharge points. The Draft EIR addresses increased runoff (see “Create or Contribute Runoff/Additional Runoff,” page 4.8-33), as well as the proposed detention requirements that the proposed project would implement to control increased stormwater. Many of the BMPs proposed under the CLRDP and its Stormwater Concept Plan have been designed to control surface water inputs to YLR and maintain water quality. Note that the Stormwater Concept Plan includes detention facilities to avoid any changes

in peak flows and both detention and treatment facilities to remove sediment and other urban pollutants from site runoff prior to discharge into YLR.

I-5-7: As discussed on page 4.8-24, the Stormwater Concept Plan is designed to meet management measures set forth in the California Management Measure for Polluted Runoff (CAMMPR), which require that, by design, the post-development average annual total suspended solids (TSS) loadings will be reduced by 80 percent or will be no greater than pre-development loadings. The Stormwater Concept Plan therefore would at least maintain current TSS loadings but, through the proposed source and treatment BMPs, would reduce current loadings up to 80 percent. This would be a significant improvement over current conditions.

I-5-8: The Stormwater Concept Plan is not designed to allow a 20-percent increase in sediment loads, as the commenter suggests. As discussed above in the response to comment I-5-7, the Stormwater Concept Plan is designed to meet the management measures set forth in the CAMMPR, which require that average sediment loads will be reduced by 80 percent or will be no greater than pre-development loadings. At worst case, the lagoon would receive pre-development sediment loads.

Obtaining the buffer strip along the neighboring agricultural lands, as suggested by the commenter, would benefit the water quality at Younger Lagoon. Obtaining the buffer strip is however not necessary as mitigation for the proposed project.

I-5-9: See the response to comment I-5-1.

I-5-10: Currently, such facilities are designed to include drained containment. This was not the case when the former aquaculture facility was constructed. The cause of the impacts of seawater spillage on YLR referred to by the commenter was that operators of the former abalone aquaculture facility regularly drained seawater in large quantities from tanks directly into percolation trenches in the ground at the edge of YLR slopes. This practice was stopped after the University learned of it. The standard of good engineering design for such facilities at this time includes drained containment, which consists of an impermeable secondary barrier between tanks and pools where seawater is used and the ground. Such secondary containment is in place in all locations where seawater is used at the Marine Science Campus, and will be required under the CLRDP as well.

I-5-11: Lagoon receives runoff not only from the project site but also from adjacent agricultural lands and other upstream sources. Therefore, the best way to monitor the effect of development on the Marine Science Campus on runoff and water quality is to monitor the discharge from the site itself.

I-5-12: The University acknowledges that when the drainage swales that conduct water into YLR need to be upgraded in such a way that the vegetation lining the swales is removed or damaged, that the vegetation will be restored.

The Resource Management Plan (CLRDP Appendix B) provides for revegetation with native species of areas from which weeds are removed in the 50-foot buffer area between YLR and the terrace. Any damage or removed vegetation in drainage swales in these areas will be subject to restoration using native plant species (see CLRDP, Appendix B, page B-44). In addition, the Stormwater Concept Plan (CLRDP Appendix D) provides for maintenance of drainage swales and vegetated filter strips, including reseeding of any bare spots and irrigation to establish healthy grass growth prior to the first storm event of the year (CLRDP, Appendix D, pages 36 and 37).

I-5-13: The concern that the wildlife corridor may not have a connection through the Swenson property is answered by the written and public hearing comments from Barry Swenson Builder and Ron Swenson. Specifically, those comments indicate a willingness to continue the corridor through the northern portion of the Swenson property, and to work with the University on an appropriate wildlife conduit under Shaffer Road if that street is opened through the railroad crossing (to Highway 1) and becomes an access road for both projects.

I-5-14: See response to comments SA-3-12 and LA-4-14 regarding the wildlife corridor and a safe crossing for wildlife across Shaffer Road. The article cited by the commenter²⁵ suggests that corridors along streams were marginally effective at 20 meters in width. Other papers reviewed (but not cited) for the Draft EIR had somewhat similar results (see, for example, Sieving et al.²⁶), finding that birds were infrequently encountered in corridors less than or equal to 10 meters wide but were always present in corridors 25-50 meters wide. However, many studies on the subject are poorly designed²⁷ or have results difficult to apply to a different biological region or taxonomic group.

I-5-15: Given the expert advice on which establishment of the corridor and buffers was determined, the evolving nature of knowledge in this field, the present lack of safe wildlife passage across Shaffer Road, and the University's commitment to promote such a passage (see the responses to comments SA-3-12 and I-5-14), a conclusion of a significant cumulative impact based on the absence of safe wildlife passage across Shaffer Road would be speculative (CEQA *Guidelines* Section 15145). Please see the cumulative impact on wildlife movement discussed on page 4.4-72 of the Draft EIR. Note that the CLRDP does not require the opening of Shaffer Road to through traffic. With respect to the property to the east of Shaffer Road, please see the response to comments I-8-2 and PH-7-3 below, which indicate the neighboring property owner's willingness to continue the wildlife corridor to the Moore Creek corridor. Therefore, there will not be a significant cumulative impact.

I-5-16: Comment noted.

²⁵ Hilty, J. A. and A.M. Merenlender. 2004. Use of riparian corridors by mammalian predators in Northern California, *Conservation Biology* 18(1): 126-135.

²⁶ Sieving, K.E., M. F. Willson, and T.L. De Santo. 2000. Defining corridor functions for endemic birds in fragmented south-temperate rainforest, *Conservation Biology* 14(4):1120-1132.

²⁷ Beier, P. and R. F. Noss. 1998. Do habitat corridors provide connectivity? *Conservation Biology* 12(6):1241-1252.

I-5-17: Noise and light impacts are dealt with in several places in the CLRDP and the Draft EIR. For instance, Implementation Measure 3.4.3 requires that sound not exceed 60 dBA CNEL at the boundary of YLR; Implementation Measures 4.4.1 and 4.4.3 limit direct lighting from buildings and parking lots. The Mitigation Monitoring Program for the CLRDP EIR specifies that the University will develop a design guideline checklist that will be used during the design process to ensure that these measures are implemented.

I-5-18: Pursuant to the CLRDP, dogs and cats as pets would not be allowed on the Marine Science Campus. The RMP states as follows: “Treat insect pests only if more than 15 percent of the trees or shrubs in a given area show significant damage, at which time an appropriate Integrated Pest Management (IPM) plan or alternative should be implemented and the use of appropriate biological controls maximized.” The design guidelines for the project (page VI-9 of the CLRDP) are quite clear: “Use plant material for both natural and ornamental areas that will be native to the Northern and Central California coast” and “plant native materials that are from the same gene pool.” The guidance provided for the facility on these issues is intended to persist for the life of the project. As stated in the RMP, “The objective of the long-term maintenance program will be to ensure the long-term protection of the terrace’s natural resources.”

1711 Quail Hollow Rd
Ben Lomond, CA 95005
March 18, 2004

Dr. Charles Eadie
Environmental Assessment Group
University of California
515 Swift Street
Santa Cruz, CA 95060

UCSC

MAR 19 2004

Re: Marine Science Campus Coastal Long Range Development Plan

Campus & Community Planning

Dear Dr. Eadie,

I don't believe the proposed development in this plan meets the requirements of the California Coastal Act for coastal dependent and coastal related uses. It is up all of us to protect coastal priority uses and I hope you will evaluate the stated uses in this plan very carefully and critically, in terms of what is in the best interest of the citizens of California. The University is trying to make a case for having this development on the coast when it most likely doesn't really need to be located there at all.

I worked for the U.S. Geological Survey for 14 years, the last several years in the Marine and Coastal program, and I was laid off in 1995. I knew of no large seawater needs at the USGS when they were considering a similar development in the early '90's. There were a few very small volume needs and those needs were easily fulfilled with the use of a seawater mix that is readily available from commercial sources. In fact, at least one scientist that I know of that used this mix preferred it because it had a more consistent chemical content than actual seawater. Yet, back in 1993 and 1994 when Wells Fargo and the University were in the planning phase of a proposed development on Terrace Point, it was claimed in public documents that the USGS required "fresh" seawater. At the time I tried to track down this need because I did not like seeing my agency used as an excuse to get a large development passed that would not have been approved otherwise. I could not find any seawater needs or plans that called for fresh seawater. I asked the Marine and Coastal managers and the University officials where these seawater claims had come from and no one could tell me.

Yet, the claims kept appearing in public documents in 1993 and 1994, and after I had raised this issue with USGS managers and University officials, plans for a seawater pipe for the USGS appeared in the draft EIR. There were also claims for shared facilities between the two entities when nothing much in that regard really existed, certainly nothing that required that the USGS be located on the coastal terrace. I wrote a response to the EIR and went on record challenging the supposed need for "fresh" seawater and claims of needs for shared facilities between the USGS and University. Later on, as you know, the whole development fizzled and I can't help but think it was at least in part because of this issue. Needs for shared facilities may exist now—I don't know, but I seriously doubt there is an actual need for "fresh" seawater by any of the USGS scientists. Please do not let this issue pass—please investigate it thoroughly. Seawater needs are easily and economically satisfied for research and for major aquariums by commercially available artificial preparations.

I lost my job in 1995 in the layoffs and subsequently filed a whistleblowing appeal, which I ended up losing. I don't think I got a fair hearing from the Federal Administrative Judge who even misstated my case in his judgment, but that is a side issue. I am mentioning this because I received several items of interest during the legal discovery process. I am enclosing a copy of one of them with this letter---notes of a 9/24/93 meeting between USGS staff, University officials and Coastal Commission staff members Les Strnad and Joy Chase, and notes of phone conversations between University and USGS officials. The notes were taken

by USGS staff member Brian Edwards. These notes seem to show the participants trying to construct a case for a seawater need by the USGS.

On the second page of the 9/15 notes Mr. Edwards indicates that the California Coastal Commission (referred to as CCC) was "surprised and upset" to learn that the USGS did not have seawater needs (indicated by, "mtg of CCC Chris mentioned no seawater [arrow pointing to] USGS [another arrow] very much surprised CCC"). A few lines further down he indicated that the Commission had been supporting the USGS part of the development based on seawater need. I would like to know what has changed between then and now. What need for seawater has developed at the USGS that can't be fulfilled with seawater mix, just as any public aquarium that is located away from the coast would use, or as any researcher whose lab wasn't right at the coast would use?

The meeting took place after the draft EIR was issued in mid-1993, and after the deadline for responses. Here are a couple of excerpts:

"LS [Les Strnad]: strongly suggests stubbing in pipes for seaH2O but not connect
-physical function connection (potential)
-helps for politicians/ commissioners
-if any potential exists then MEF [Mike Field of USGS] says yes on seaH2O"

"may or may not be done in lab settings
not a plan but a possibility
CA [Christine Aldecoa of UCSC] asks MEF write "outline" how seawater might be used
-seawater delivery capability
physical function"

Through the discovery process I received a set of records that appear to show repeated attempts to make a case for a need for seawater by the USGS where no such need apparently existed. I will share more of these records if you desire to see them, although I don't think it is necessary because what needs to be done now is to investigate current seawater needs or other claims that the proposed developments in this plan need to be located at the coast.

My point is that you owe it to the people of California to carefully evaluate the seawater needs of the entities that comprise this proposed development. If they assert that they need "fresh" seawater and are using that assertion to justify "coastal dependency" as defined by the California Coastal Act, their claim should be carefully examined. Don't take their word for it—you need to have experts with no stake in this development or affiliations with these organizations to review the stated needs to see if they are real.

Best regards,


Leda Beth Gray

Cc: Terrace Point Action Network,
Charles Lester, California Coastal Commission

- she will work on reviewing
need the CDD synopsis

3/15

Call to Christine Alderson

- USGS only public respondents
- E ~ 15
- process

- Stephanie Stelbow has → indiv comments
of sent to appropriate people

- probably not significant enough to require issue
- Separate volume probably → appended to DEIR
- one admin review

- 10 days before completion each agency
that response copy for review

- Duration of EA for FOWSI / non-FOWSI → forced to EIS?

* Coastal Commission is asserting that:

visual impact... is a Significant Impact.

↳ UCSC may tell CC they are wrong

∴ argue strongly it isn't

- if regents agree not significant then not significant
- but CC can choose to not issue permits

• All 1986 letters persuasive
• Coastal Comm → visual impact → Product??

may need to EIS do

Jay Chase
 Tanya Carone
 Les Stead

- Another issue came up → CA needs to talk w/ Michael Houlman
- possible mtg needed w/ me, CA, MH, & Steve Davenport

- Coastal - Abolition issue - can't address that right now
 ↳ (maybe the "mystery issue" for Houlman)
 ↳ if this is the issue, MEF wants to attend

- 2:15/p another call to Chris Aldean

- Did talk w/ Michael H

- Question of BPTA is truly coastal-related &
 ↳ in mtg w/ CCC Chris mentioned no seawater → USGS
 ↳ very much surprised CCC

↳ Les & Jay surprised & upset
 ↳ miscommunication!!!

f of CCC not attending the facilitated mtgs??

- The CCC had been supporting the USGS part of project based on seawater

⇒ if part of USGS bldg is coastal dependent (needs seawater) the tight association of BPTA makes the rest coastal-related

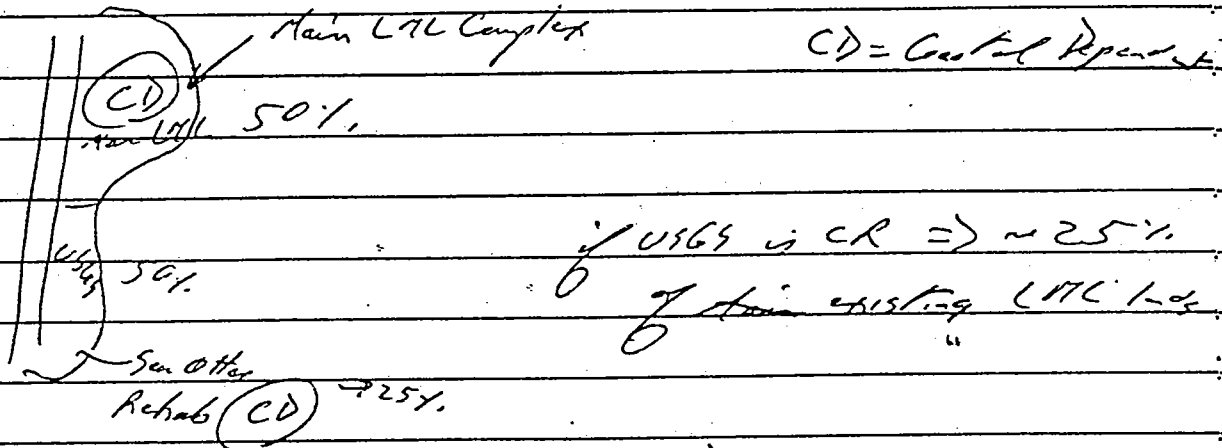
- CA's take is that Les truly wants to help
- CCC decision really @ permitting stage ⇒ ~ Feb
- w/ no seawater pulls out underpinnings for CCC
- Les wants mtg w/ Steve D, Les, BDE

9/24

- Called & briefed Ed Tony Pino
- Called Barbara & out on AL thru Mon
 ↳ will try to FAX her E memo

9/24 Mtg w/ Coastal Commission

- Les Strand, Jay Chase (Sr Staffer), ^{Alison} Chris A, Steve D, Abe F, Gary G, BDE
- Jay is principle analyst working for City SC ⇒ YPP



CCC looks @ Coastal makeup ⇒ % of activity

if we can demonstrate a present or future need (⇒ potential for some time in future)

makes process easy

↳ M&F says unequivocal YES

↳ evolving stroke ⇒ related to seabed (eg seawater flow)

- no definite plan now but potential (perhaps) in future (says 4 yrs)

CCC - future options are considered

Exhibit 15

- US: strongly encourage stubbing in pipes for sewH_2O but not connect

⇒ physical function connection (potential)

→ helps for politicians / commissioners

→ if any potential then NBF says yes on sewH_2O

- uncount. energy

- wetlands

- biological habitats

→ may or may not be done in lab settings
not a plan but a possibility

CP asks NBF write "outline" how sewwater might
" be used.

→ sewwater delivery capability

⇒ physical function "supported" if we put plumbing into bldg

⇒ long range planning not just covering tracks

NBF: program in general related to MBMS

Envir (Pristine → Damaged)

Coastal / Marine / Bay areas (Ecosystem property / people / impacts)

Resources (Mineral, Energy, Water (aquifer))

Knowledge Base (incl. a. trends)

emphasizes connection (need for access to university talent (incl. / toxicology))

NBF
Ways to Link to LITL

① Physical facilities

② Direct programmatic ties

- of short course being planned w/ LITL

- environ & coastal science trained @ policy makers

- MBMS document

- political rewards

- coastal processes

- teaching & short courses

Steve Davenport → more or quality thinking of plumbing seawater into their space → Future opt. - excellent for Las Vegas

McFagan

H2O

③ Synergism → gang strengths

SD: Marine Education Laboratory (not Visitor Center)
 ↳ → outreach

2
 25

Ratios of Awards to Support are significant

18

Infrastructure for overall project is ^{the} big problem

⇒ not USGS being @ LTL

1/10/9

↳ also a f of Public Works Dept in Santa Cruz

tasks

↳ practical reality of (PWR) implementing the infrastr.

↳ that is agreed upon / guaranteed

1/10/9

COMMENT LETTER I-6: LEDA BETH GRAY

I-6-1: There have been significant changes in the United States Geological Survey (USGS)' research program from the programs proposed in the early 1990s, the time period described by the commenter. Fresh seawater is needed at the proposed USGS facility primarily to serve biologists working on coastal and marine ecosystems. See the letter from USGS that follows this page.



United States Department of the Interior

GEOLOGICAL SURVEY



Western Coastal and Marine Geology Team
400 Natural Bridges Drive
Santa Cruz, CA 95060
(831) 427-4706
sjohnson@usgs.gov

April 5, 2004

Mr. John Barnes
Environmental Assessment Group
University of California
515 Swift St.
Santa Cruz, CA 95060

Dear Mr. Barnes:

I write in response to the 3/04 letter you received from Ms. Leda Beth Gray concerning the proposed U.S. Geological Survey (USGS) building at the UCSC Marine Campus. Ms. Gray is apparently unaware that the USGS intends this facility to serve as an integrated coastal-marine science center, incorporating scientists from the four disciplines (Geology, Biology, Hydrology, Geography) that now comprise the USGS. The need for fresh seawater at the proposed facility is primarily to serve USGS biologists working on coastal and marine ecosystems. This is a significant change from the early 1990's, the time period described by Ms. Gray in her letter.

Sincerely,

Samuel Y. Johnson
Team Chief Scientist

3/17/04

Randa Johnson
7515 E. Zayante Road
Felton, CA 95018

UCSC

MAR 18 2004

Campus & Community Planning


Environmental Assessment Group
515 Swift St.
Santa Cruz, California, 95060

To the Environmental Assessment Group:

I am writing to express my concern about the proposed lay down yard along Shaffer Road, part of the UCSC Marine Science site. I am part of a cohousing association which has been working since 2002 with Barry Swenson Builders and Ron Swenson on plans for a cohousing community on the Swenson property at Delaware and Shaffer. My two main concerns are the size and unsightliness of the proposed buildings, and the possible use of toxic chemicals on the site. If it were possible to locate the lay down yard on the interior of the site, and put residential or office buildings along Shaffer, that would be much more compatible.
Thank you for your consideration.

1

Sincerely,



Randa Johnson
President, Santa Cruz Cohousing Group

COMMENT LETTER I-7: RANDA JOHNSON

I-7-1: As indicated in the Draft EIR on page 4.1-35, as new development would be clustered and set back at least 15 feet from Shaffer Road, an unimpeded view corridor looking south along Shaffer Road through the site to the ocean would be preserved. The CLRDP design guidelines would help to ensure that individual structures are designed to be visually sensitive to the surrounding environment. The exterior materials and aesthetic and architectural treatments would be selected from the palette of colors that occurs naturally onsite, including tans, greens, and blues, and would be designed to harmonize with the surrounding coastal-rural landscape. The buildings would be limited to 36 feet in height (and the currently proposed Shared Campus Warehouse and Laydown Facility would be only approximately 35 feet in height). Landscaping proposed as part of the project, when mature, would soften and partially screen the bulk of the structures. Additionally, the remainder of the upper terrace, including a 20-foot-wide wildlife corridor along the northern edge of the site, as well as a drainage ditch, two seasonal wetlands, and associated buffer areas, would be preserved as open space.

As indicated in the Draft EIR on page 4.7-17, the Shared Campus Warehouse and Laydown Facility would contain chemicals, paints and petroleum products, and other potentially hazardous substances in commercially available containers and quantities. However, as indicated in the Draft EIR on page 4.7-18, given the current UCSC hazardous materials programs in place, incorporation of CLRDP Implementation Measures 3.10.1 and 3.10.2, Project-Specific Mitigation Measure 4.7-1, and continuing adherence to state and federal regulations pertaining to hazardous materials, the potential impacts of any releases of such materials would be less than significant. Potential impacts related to the visual effects and possible use of hazardous materials at the site of the proposed warehouse and laydown yard are addressed in the Draft EIR in Section 4.1, Aesthetics, and Section 4.7, Hazards and Hazardous Materials (see also the response to comment I-8-4).

BARRY SWENSON BUILDER
 829 FRONT STREET • SANTA CRUZ, CALIFORNIA 95060 • (831) 425-5736 • FAX (831) 425-0129

CONTRACTORS LIC. 342751

March 19, 2004

Environmental Assessment Group
 University of California
 515 Swift Street
 Santa Cruz, CA 95060

UCSC
MAR 19 2004
 Campus & Community Planning

RE: Comments on the Draft EIR for UCSC Marine Science Campus CLRDP

Dear Neighbors:

On behalf of the property owners of the ten acres located across from the UCSC Marine Science Campus, along the Northeast corner of Shaffer and Delaware Roads (Antonelli Pond Property), we have reviewed the Draft EIR for the CLRDP and last week held a meeting with Steve Davenport and John Barnes of the UCSC staff to discuss a number of matters which are elaborated below. We are supportive of your project and we are glad you give us the opportunity to look over your master plan.

1. Definition of Shaffer Road Right-of-Way

Background: Due to a historic circumstance, only half of Shaffer Road was originally paved in the 1960's. This half was built onto our property by way of a Right of Way, as prescribed in documentation on file with the Santa Cruz Public Works Department. It can also be observed directly by the completed curbs and gutters on the east side of the road. Upon reviewing the CLRDP and verifying these details with the Santa Cruz Public Works Department, we noted that the Shared Campus Warehouse and Lay down Facility and Support Housing buildings appear to be positioned within the street right-of-way.

1

Recommendation: It would seem appropriate to represent this alignment in future drawings. As we discussed, should the City be amenable to less than a 52' wide road, the additional portion that would be built into the UCSC Property could be less than the prescribed 26', as identified in the Right of Way documents.

2. Wildlife Corridor

Background: The University plan and our own development plan both contemplate a wildlife corridor along the south side of the railroad tracks.

2

Recommendation: We would like to suggest that any improvements to the road to support a contiguous trail for the animals, i.e. under-road culverts, be a shared cost to both projects. In the event an at-grade rail crossing is not required, as traffic activity for both sites is likely to be light, especially now that less intensive development is contemplated on the northern portion of the UCSC site, we would be cooperative if your plans were to show an uninterrupted wildlife corridor as an alternative. We would envision cutting back a few feet of Shaffer Road and removing existing pavement to allow natural vegetation continuously from the Younger Lagoon and other areas west of the UCSC property, through our property to Antonelli Pond and the riparian corridor to the east of our property.

3. Railroad Tracks Grade Crossing

Background: At the time of the previously submitted development proposals, Terrace Point included a significant amount of single family homes. As a result, the General Plan for the City of Santa Cruz proposes a grade crossing of the railroad tracks to connect Shaffer Rd. Under the new development scenario of the UCSC Property, traffic will be considerably less. Therefore, this at grade crossing may not be necessary.

3

Recommendation: If acceptable by the City to eliminate the automotive crossing, we would hope that you would consider a pedestrian and bicycle friendly crossing on Shaffer Road.

4. Visual and Noise Impact of Proposed Usage North of Delaware

Background: While attention has been given to wide setbacks from neighboring residences on the UCSC property south of Delaware, we note that the nature of activity for the proposed Shared Campus Warehouse and Laydown Facility and Support Housing is out of character with the proposed residential development on our side of Shaffer Road.

Recommendation: While we do not object to the proposed land use in principle, we do suggest that a combination of wider setbacks, landscaping and building orientation (see Item 5 below) be addressed for these facilities, to demonstrate that appropriate accommodations will be made to maintain compatibility with our proposed land use. It is noted that the southwest portion of the designated area does not show any buildings, and therefore that area could accommodate one of the Support Housing structures, presumable the one which is shown positioned in a north-south orientation along Shaffer Road which would be most appropriately oriented along an east-west axis in any case (again, see Item 5 below).

4

5. Solar Orientation

Background: The CLRDP Draft EIR states, "The designs of new buildings would follow appropriate building design requirements, such as passive solar design, and utilize energy-efficient methods and appliances, such as solar hot water systems and low-flow showerheads." [4.16-16]

In order to achieve this goal it is necessary for the major axis of buildings to be east-west, so that windows can effectively receive maximum solar radiation in the winter and minimum in the summer, and roof areas for solar thermal and/or solar electric panels can receive maximum solar radiation. This basic principle is well-illustrated on the web at <http://www.WindowsSouth.com/>.

Furthermore, the intended theme of sustainability and solar energy is as much a part of our proposed project as yours, and, in order to endorse what has become a broad community effort, it will be especially fruitful if we coordinate our designs together with that theme in mind.


5

Recommendation: While it is obvious that building footprint representations in Fig. 3-7 are essentially cartoons to demonstrate general principles, nonetheless it is deemed appropriate to have the drawings become consistent with the goals expressed in Section 4.16 above. When architects and planners see that the University is paying attention to these details, they will be motivated to design explicitly according to these criteria, and the visual as well as functional aspects of our two projects will be compatible and responsive to the growing awareness and attention to energy conservation in buildings.

Conclusion:

Thank you again for taking your time to meet with us and share your vision of the UCSC Marine Science Campus. We hope the preceding thoughts might be constructive to assist in improving your project design. We look forward to mutual success in completing both of our development goals. If there is any assistance we can provide throughout your plan adoption process, please do not hesitate to contact me directly at 408-938-6357.

Sincerely yours,



Mike Perkins, Project Manager

cc:

Steve Davenport
John Barnes
R B Swenson
Jesse Nickell III

COMMENT LETTER I-8: MIKE PERKINS

I-8-1: Please see the response to comment SA-3-86.

I-8-2: As stated in its comment letter (LA-2-14), the City stresses the need to complete the remaining portion of Shaffer Road, including the railroad crossing. In this context, the suggestion of removing a portion of Shaffer Road to create an uninterrupted wildlife corridor, which would require the cooperation and approval of the City, would not be a feasible alternative. CLRDP Implementation Measure 5.1.4 states that the University will work with the City to maintain wildlife corridor connectivity.

I-8-3: The Draft EIR (page 4.15-70) also concluded that, based on the proposed level of development and types of land use under the CLRDP, the projected traffic volumes would not warrant an automotive road crossing on Shaffer Road at the railroad tracks. Should the City propose to develop a pedestrian and bicycle crossing at this location, the University will support this action.

I-8-4: The layout of the Shared Warehouse and Laydown Facility is constrained to the north by the wildlife corridor and to the west by the resource protection buffer. A wider setback would not be feasible. However, the project includes landscaping that would soften and partially screen the bulk of the structures. Although the University understands that the adjacent vacant parcel is zoned residential, no plans have been put forth so far and no application is on file with the City for the development of this land. Therefore, the University cannot design for compatibility with a project that has not as yet been proposed.

I-8-5: Sustainable design practices will be taken into consideration during project design in determining the orientation of buildings. Other factors will include the design principles and plan concepts presented in Chapter 4 of the CLRDP and the site constraints shown on Figure 3.16 (page III-24 of the CLRDP). Note that the north-south axis is shown for many of the buildings in the prototype site plan because this orientation of buildings minimizes visual impacts of the development.

UCSC

MAR 19 2004

Campus & Community Planning

SolarQuest®
P O Box 7080
Santa Cruz, CA 95061
tel +1.831.425.8523
www.solarquest.com

March 19, 2004

Environmental Assessment Group
University of California
515 Swift Street
Santa Cruz, CA 95060

RE: Solar Design, Draft EIR for UCSC Marine Science Campus CLRDP

Dear Environmental Assessment Group:

I am pleased to have the opportunity to comment on the Draft EIR for the CLRDP. I am supportive of the Plan and am writing to elaborate upon one detail which is summarized in a separate letter from our staff.

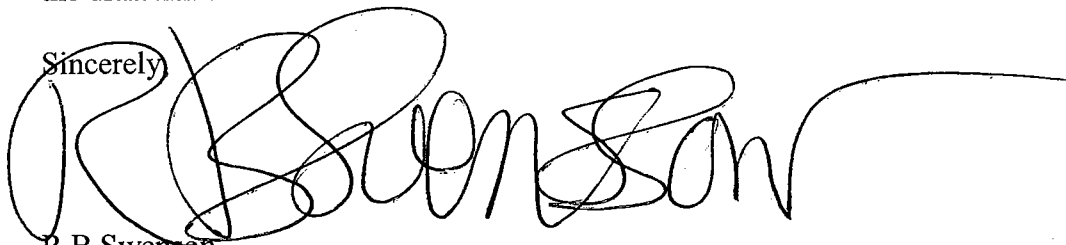
The CLRDP Draft EIR states, "The designs of new buildings would follow appropriate building design requirements, such as passive solar design, and utilize energy-efficient methods and appliances, such as solar hot water systems and low-flow showerheads." [4.16-16].

Figure 7.12 in the Building Study for the 42 apartment/townhouse units demonstrates attention to the wind as a factor in design, but overlooks the importance of providing direct solar access, the most important factor in mitigating the force of wind and excessively cold or warm weather in general.

To achieve the goal expressed in Section 4.16 it is essential for the major axis of buildings in our climate zone to be oriented east-west, so that windows can effectively receive maximum solar radiation in the winter and minimum in the summer. This basic principle is illustrated on the following page with pictures from the website <http://www.WindowsSouth.com/>.

I look forward to reading your responses to the comments that have been submitted on the draft EIR.

Sincerely,



R B Swenson

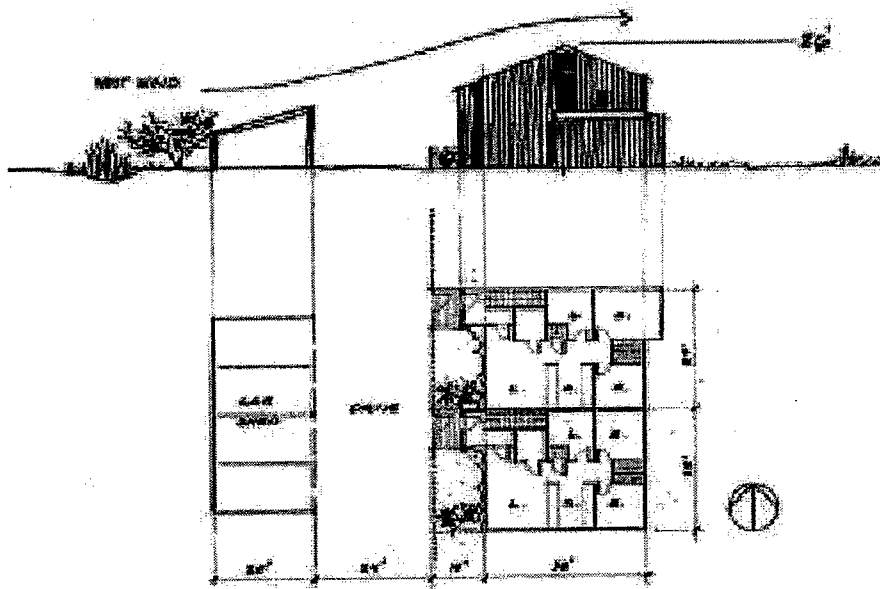
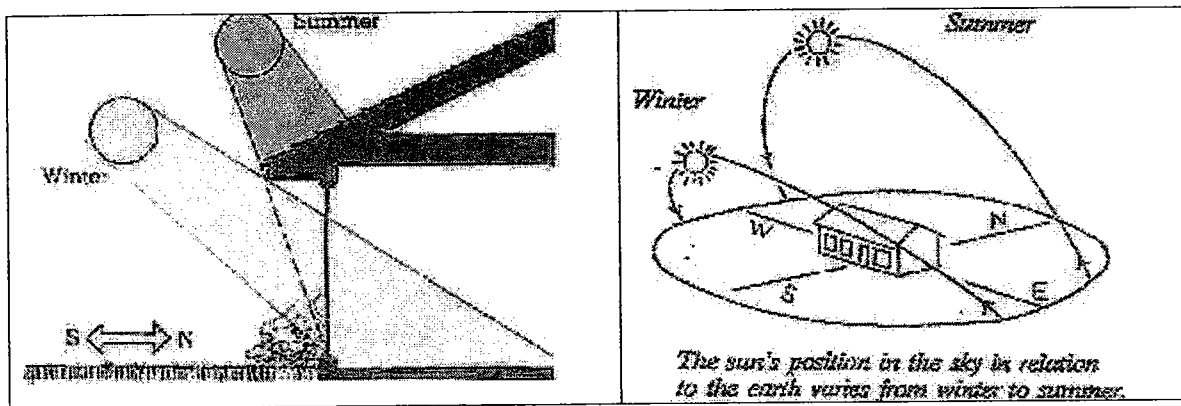


Fig. 7.12 Apartment/Townhouse Layout

When a multi-unit building is oriented with windows primarily to the East and West, as shown above, all but the most southerly unit is permanently shaded from the stronger midday sun. In the illustration, with insignificant windows and no overhangs, even the southerly unit does not receive adequate sunlight for comfort, light and health. In the summertime, with east-west oriented windows, sunlight on the west side can create excessive heat and discomfort as well. This can be remedied, as shown below, by orienting the major axis of the building east-west. Other measures can be derived to minimize discomfort from winds which prevail on this site from the west.



COMMENT LETTER I-9: R.B. SWENSON

I-9-1: The orientation of the 42 Apartment/Townhouse Units shown on the prototype site plan (Figure 7.2, page VII-3 of the CLRDP) is constrained by the view corridor (see Figure 3.16 on page III-24 of the CLRDP) and the design principles and plan concepts in Chapter 4 of the CLRDP. In addition, the building configuration presented in the prototype site plan is only one possible layout. Consistent with Policy 3.11, sustainable design practices will be considered during the project design phase and different building orientations may be developed, provided that the new building orientations do not result in significant visual impacts.

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PUBLIC HEARING

UCSC MARINE SCIENCE CAMPUS
COASTAL LONG RANGE DEVELOPMENT PLAN
DRAFT EIR

THURSDAY, FEBRUARY 19, 2004

6:00 - 8:00 P.M.

LA FELIZ ROOM, SEYMOUR MARINE DISCOVERY CENTER
LONG MARINE LABORATORY
100 SHAFFER ROAD, SANTA CRUZ, CALIFORNIA

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THURSDAY, FEBRUARY 19, 2004 - 6:00 p.m.

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FRANK ZWART: I think we'll convene the public hearing. Last call for cookies.

Good evening. My name is Frank Zwart. I'm the campus architect and associate vice chancellor for physical planning and construction at UC Santa Cruz. I will be conducting the public hearing tonight and will be receiving public testimony on the Draft Environmental Impact Report for the proposed Marine Science Campus Coastal Long-Range Development Plan.

The Draft Environmental Impact Report for the project was filed with the state clearinghouse on January 29th, 2004, and has been made available to the public, excuse me, for a fifty, five zero, day review period. The purpose of the review period is to allow public agencies and members of the public an opportunity to review and provide comments on the analyses in the Draft EIR for the proposed project.

Because the purpose of tonight's hearing is to receive public testimony on the Draft, the University presentation will be brief, and our staff will not answer questions or react to public testimony tonight. We will, however, answer procedural questions, if they arise.

1 Tonight's hearing is being recorded by a court
2 reporter. Following the hearing, a transcript will be
3 made which will become part of the Final EIR. If you
4 wish to speak, we ask that you fill out a request-to-
5 speak form available on the table in the back of the
6 room and submit it to Shabnum -- Shabnum or Alisa, who
7 will make themselves available.

8 How many people currently plan on speaking? So
9 we have got at least three and maybe more. You can
10 change your mind later. I don't think -- we'll call on
11 people to speak in the order in which we receive the
12 forms. And given that we don't have a big crowd, we
13 won't put a time limit on individual comment. But I
14 will say that tonight's hearing will end promptly at
15 8:00 p.m., if not before.

16 Any comments you have that are not made orally
17 tonight may be submitted in writing during the public
18 comment period. We have for you tonight a form that can
19 be used for written comments, and you can submit those
20 either tonight or mailed in to the address on the bottom
21 of the form during the public review period. We also
22 have at the back of the room an information sheet
23 describing the project.

24 Are there any questions concerning the
25 procedures for tonight's hearing? Yes?

1 AUDIENCE MEMBER: It's a procedural question,
2 but not for tonight. But when do you plan to publish
3 the Final EIR?

4 FRANK ZWART: It depends on the extent of
5 comments and how long it takes to respond to them. I
6 will look to Shabnum and Alisa. I would assume that we
7 would -- well, I'll let you answer. Alisa?

8 SHABNUM BARATI: That's totally correct. It
9 would depend what we get in terms of comments, not just
10 tonight, but we will be getting comments through the
11 mail. We close on March 5th; right?

12 FRANK ZWART: I will get to -- let's see --

13 SHABNUM BARATI: The 19th.

14 FRANK ZWART: March 19th is the close of the
15 public comment period.

16 SHABNUM BARATI: At the end of the public
17 comment period when we close, we will see how long we
18 get in comments and how long it takes us to respond.

19 FRANK ZWART: Does that answer your question?

20 AUDIENCE MEMBER: Yes, it does.

21 SHABNUM BARATI: It shouldn't take too long.

22 FRANK ZWART: Before we take public testimony,
23 Steve Davenport, who is assistant director of the
24 Institute of Marine Sciences and Long Marine Lab will
25 provide a brief description of the project. I will then

1 go through a brief description of the CEQA process with
2 some of the dates and time frames, and then after that
3 Marty Abell, the consultant who managed the Draft EIR
4 for the project, will summarize the context of that
5 document. And with that, I will turn the microphone
6 over to Steve.

7 STEVE DAVENPORT: All right. Thank you, Frank.
8 And welcome to Long Marine Lab and the UC Santa Cruz
9 Marine Science Campus. This will be really brief.

10 I guess we're all sort of presuming at this
11 point, since it's comments on the EIR we're here for,
12 that probably we're all somewhat familiar with the plan.

13 We began work on this Long-Range Development
14 Plan in 1999, which included a series of public
15 workshops and presentations to keep you and our
16 community informed of the progress and the process of
17 that planning, and we're are now pleased to have
18 published this plan and its companion EIR.

19 And we can put a little background stuff up
20 there. The purpose, of course, of tonight's meeting is
21 to give you an opportunity to comment on the Draft
22 Environmental Impact Report report, which is an analysis
23 of the potential impacts of implementing this Coastal
24 Long-Range Development Plan. And Marty Abell of
25 Environmental Science Associates will be following me to

1 introduce the EIR and to give a summary of EIR
2 conclusions.

3 Now, let me give you a quick overview of the
4 Long-Range Development Plan. First of all, long term in
5 reality here means probably a minimum of 20 years,
6 probably more like 20 to 40, in terms of the
7 University's ability to really build this thing out.
8 However, for the purpose of the EIR, an accelerated
9 schedule of full build-out by the year 20/20 is assumed.

10 The LRDP was developed with the intention of
11 being a self-mitigated plan; that is, it was designed in
12 a way from the start to minimize the potential impacts
13 it will have on the environment. And a perusal of the
14 table of contents of the plan illustrate this
15 self-mitigating concept. The plan considers
16 environmental and physical constraints. It develops
17 design principles and guidelines that address these
18 constraints, and includes the principle of sustainable
19 design and development; that is, green building
20 principles, and it includes enforceable land use
21 policies for each category of the plan as a guide to
22 physical development.

23 Two important studies in the sub plans are
24 noteworthy and are appendices to the plan. The first is
25 the Resource Management Plan, which deals with the

1 natural habitat area and open space for the plan, and
2 findings from those studies and that plan are translated
3 into policies that are adopted as part of the Long-Range
4 Development Plan.

5 The other sub plan is the Stormwater Management
6 Plan, which is also an appendix, which is a guide to
7 development of control of stormwater, but also with an
8 aim to the benefit of the habitat in natural areas and
9 the recharge of groundwater and so forth. And so now,
10 let's go on to a summary of the plan.

11 The slide that's up shows the existing
12 facilities. And let me just orient you. By the way,
13 all of these are duplicated on paper boards on the side
14 here. Up on this plan is north, and the down side is
15 south, and the Pacific Ocean is out here. We are in
16 this building, that's the Seymour Marine Discovery
17 Center. The existing buildings on the site, and I
18 include the NOAA Fisheries Laboratory in this, equal
19 approximately 162,000 gross square feet.

20 This slide shows a few of the site constraints
21 that were considered in developing the site plan. The
22 most prominent of which are the wetland areas that Terry
23 went over earlier, for those of you who were here for
24 his presentation, but noting the coastal bluff, the
25 agriculture edge to the west and a number of view

1 corridors that were established throughout the site.

2 This is the land use diagram intended to show
3 that all of the development, both existing and proposed,
4 are contained within these three development envelopes.
5 The total development area within these three envelopes
6 is somewhat under 29 acres. Our total site area, when
7 you include the NOAA Fisheries Laboratory, which is a
8 federally-owned in-holding in the rest of the site, is
9 roughly a hundred acres; therefore, the portion of
10 developed land on the site would be 29 acres, leaving 71
11 percent open.

12 If you remove the land area or the area of the
13 Younger Lagoon reserve from that, it leaves about a
14 76-acre site, and the developed -- these three
15 development envelopes then represent 38 percent of the
16 site or leaving 62 percent open outside of the Younger
17 Lagoon.

18 This labeled the Population Projection Table I
19 actually put up because it nicely summarizes the
20 building program.

21 Just a couple of things to note, this table
22 includes some outdoor areas in the development square
23 footage. If you adjust for that, as you can see,
24 existing buildings total about 162,000 square feet.
25 Proposed buildings total about 400,000 square feet for a

1 total at full build-out of 562,600 square feet. That
2 translates to the proposed new buildings being
3 approximately two and a half times what the existing
4 buildings are now in area.

5 If you look over at the average daily
6 population column, you can see that our current average
7 daily population is approximately 425 people. At full
8 build-out, that's projected to add 888 people for a
9 total of 1,313. And, again, the proposed additional
10 population, average daily population is roughly two
11 times what the existing population is.

12 And my final slide, this is prototype site
13 plan, and the purpose of this is to illustrate one way
14 in which all of this building area would fit into these
15 three development envelopes at full build-out. The
16 light gray buildings represent, again, the existing
17 buildings, and the darker gray buildings are proposed
18 buildings under the plan.

19 So with that brief summary -- there are copies
20 of the plan on the back table. Also, from our campus
21 Community Planning office you can pick up, free of
22 charge, a CD version of the plan, if you would like to,
23 along with the EIR.

24 And at this time I'm going to turn this back
25 over to Frank to talk about the CEQA process. Thank

1 you.

2 MR. ZWART: Thanks, Steve.

3 I will take a moment now to describe the CEQA
4 process for the Coastal LRDP. Do we have any more
5 PowerPoint presentations? I don't think so. Marty, you
6 are not? Why don't we put the lights back on? Thank
7 you.

8 On November 1st, 2001, the Notice of
9 Preparation, or NOP, for this EIR was circulated to
10 state, regional and local agencies, and to several
11 community organizations and individuals. A scoping
12 meeting was held on November 14th, 2001, here at the
13 Seymour Marine Discovery Center at Long Marine Lab. The
14 Draft EIR was then prepared by Environmental Science
15 Associates under the direction of their project manager
16 Marty Abell, who you will meet in a moment, with
17 oversight and input from the campus.

18 As I mentioned earlier, the Draft EIR was filed
19 with the state clearinghouse on January 29th and is now
20 being circulated for review. The 50-day review period
21 ends on March 19th, 2004, and this is the public hearing
22 on the Draft EIR. All oral comments received tonight
23 will become part of the public record for the project.
24 All written comments or questions regarding the Draft
25 EIR should be addressed to Environmental Assessment

1 Group, University of California, 515 Swift Street, Santa
2 Cruz, California 95060. That address is available on
3 the bottom of the written comment sheets in the back of
4 the room.

5 Following the public review period, a final EIR
6 will be prepared that responds to oral comments received
7 tonight at the public hearing and to written comments
8 received during the public review period. The regents
9 will review and consider the Final EIR prior to any
10 decision to approve, revise, or reject the proposed
11 project. After the Board of Regents has approved the
12 Coastal Long-Range Development Plan, the University will
13 submit it to the California Coastal Commission, which
14 will review it for consistency with California Coastal
15 Act requirements.

16 And now I'd like to introduce Marty Abell, who
17 will summarize results of the topical analyses presented
18 in the Draft EIR. Marty?

19 MARTY ABELL: Thank you, Frank.

20 For those of you who haven't yet seen it, the
21 Draft EIR does look like this, and I believe there are a
22 couple of display copies on the back table. And I
23 understand that public review copies are available at
24 the McHenry Library on campus and at the main branch of
25 the city library.

1 As Frank mentioned, my name is Marty Abell; I'm
2 with Enviromental Science Associates of San Francisco,
3 and we were the University's prime contractor for
4 preparing the Draft EIR.

5 As I'm sure most if not all of you know, the
6 California Environment Quality Act requires an EIR,
7 Environmental Impact Report, for any proposed project
8 that could have a significant effect on the environment.
9 And the CLRDP is such a project and, therefore, we have
10 prepared the EIR.

11 The Draft EIR itself consists of five main
12 components, the first of which is the project
13 description, which Steve has covered in his remarks, and
14 actually is pretty well represented by the four boards
15 -- the first four boards up here on the wall.

16 In addition to the overall program, the CLRDP
17 itself, the EIR also adresses five what are called
18 near-term projects; that is, the first five projects
19 that are anticipated to actually be implemented under
20 the CLRDP. They are expected to be, at least for the
21 purposes of the EIR, they are expected to be complete by
22 the year 2010, and they consist of a shared campus
23 warehouse and laydown facility, which would be in the
24 upper terrace of the development areas; the Sea Otter
25 Research and Conservation Center; USGS Western Coastal

1 and Marine Geology facility; 42 apartment and townhouse
2 units, all of which would be in the middle terrace; and
3 the Center for Ocean Health Phase II, which would be in
4 addition to the existing Ocean Health building.

5 The second main part of the Draft EIR is the
6 description of the environmental setting, and that is an
7 emphasis on the physical environment in which the
8 project would actually be implemented. This includes
9 the project site itself as well as the area in which the
10 project's effects could occur.

11 The third important component is actually the
12 analysis of the significant environmental impacts of the
13 project on the environmental setting. It's important to
14 keep in mind when reviewing the EIR and considering its
15 adequacy that CEQA defines a significant environmental
16 effect as a substantial adverse change in the physical
17 conditions in the area affected by the project, with the
18 emphasis on physical conditions.

19 The fourth component of the Draft EIR is the
20 mitigation measures description in which we identify
21 measures that would reduce or avoid any of the
22 significant environmental impacts of the project.

23 And, finally, the fifth major component is a
24 chapter on alternatives. The EIR is required to address
25 a reasonable range of alternatives with the emphasis on

1 alternatives that could reduce or avoid one or more of
2 the significant effects of the project.

3 For those of you who actually do read or review
4 the EIR, you will find that the heart of the EIR is in
5 chapter 4, which contains three of those main five
6 components; the environmental setting, the impact and
7 the mitigation discussions for 16 major environmental
8 topics that are identified in the implementing
9 guidelines for the California Environmental Quality Act.
10 Those are summarized at the bottom of the first page of
11 the handout for this evening's meeting, and I will just
12 list them quickly: aesthetics, agricultural resources,
13 air quality, biological resources, cultural resources,
14 geology and soils, hazards and hazardous materials,
15 hydrology and water quality, land use and planning,
16 mineral resources, noise, population and housing, public
17 services, recreation, transportation and traffic, and
18 utilities service systems and energy.

19 The conclusions of the EIR and the impact
20 analysis and mitigation analyses presented in the 16
21 topical areas are that the project would have
22 significant and unavoidable environmental impacts in
23 two of those areas.

24 In traffic, which is commonly the culprit in
25 our EIRs, there would be an increase in or a decrease in

1 level of service and increase in traffic congestion at
2 the Mission and Bay Street intersections, the Mission
3 and Chestnut intersections, and the mitigation that's
4 identified in the EIR for those impacts would be
5 restriping and reconfiguration of those -- of those
6 intersections. Because those mitigation measures are
7 not within the authority or the ability of the
8 University to implement and, in fact, there may not be
9 adequate right-of-way to accommodate the necessary
10 reconfiguration of those intersections, those impacts
11 have been determined to be significant and unavoidable.

12 The EIR also looks at what are called
13 cumulative impacts; that is, the impacts of all
14 projects, past, present and probable future projects
15 together with the proposed project. And in the case
16 where those impacts are also significant, the EIR asks
17 whether the project's contribution to those impacts
18 would be considerable. And in the case of traffic, the
19 EIR does include an additional five intersections for
20 which the project itself would not cause a significant
21 impact. It would, though, have a considerable
22 contribution to unacceptable conditions at those
23 intersections. And those -- the mitigation, again,
24 would be some reconfiguration or signalization of those
25 intersections. But, again, those mitigation measures

1 would be outside the control of the ability of the
2 University to implement and, therefore, the EIR must
3 find them significant and unavoidable.

4 Apart from traffic, the other significant and
5 unavoidable impact that the EIR identifies is the
6 project's contribution to a cumulative water supply
7 deficit for the city, the city's water district. And
8 there is no mitigation, again, that the University can
9 unilaterally implement that would alleviate that
10 condition. It will, of course, implement low-flow/low-
11 flush facilities. It's actually, though, the city's
12 responsibility, and they are now underway in looking for
13 additional water supply.

14 In addition to these significant and
15 unavoidable impacts, the EIR also identifies five
16 impacts that are potentially significant, but could be
17 mitigated to less-than-significant levels by measures
18 that are identified in the EIR. The first is
19 construction air quality, mainly dust, and that could be
20 mitigated with a dust abatement program that would limit
21 grading in windy -- during windy periods and would
22 suppress dust by sprinkling it over and covering and so
23 forth, so that's an impact that can be mitigated during
24 construction.

25 A cultural resources impact, and though there

1 are no recorded archaeological sites on the project
2 site, there is always some potential for uncovering
3 Native American remains, artifacts during the
4 construction process, and there is a protocol that is
5 actually established in the CEQA guidelines for dealing
6 with that eventuality, should it actually occur.

7 Hazards and hazardous materials used by non UC
8 entities is a potentially significant impact, but as
9 long as the University requires any non UC users of the
10 site in the facilities to implement the same level of
11 controls that are required of UC labs and departments,
12 that that impact would also be mitigated to less than
13 significant.

14 The fourth is operational noise, in which the
15 project could place sensitive noise uses or, sorry,
16 sensitive noise receptors near noise generators, and in
17 that case design measures can typically be employed for
18 the sensitive receptors or to mitigate the noise from
19 operational equipment and so forth. So design measures
20 are available to mitigate that impact to less than
21 significant.

22 And the fifth and final one is construction
23 noise, and the mitigation for that is to implement a
24 construction noise mitigation program that would limit
25 hours of noisy construction activity and limit hours of

1 construction.

2 There are a couple -- excuse me, a few other
3 impacts that while not significant, and are actually
4 identified as less than significant in the EIR, but the
5 University has identified some mitigation measures, even
6 though the impacts would not be significant and were not
7 found to be significant in the first instance.

8 One is agricultural resources, and the EIR
9 indicates that the CLRDP could plausibly create
10 pressure to convert adjacent farm land, presumably the
11 Younger Ranch adjacent to the west, to other uses. And
12 the University does propose to put up a fence that would
13 separate the northern part of the CLRDP in the northern
14 part of the site from the adjacent ranch, which would
15 have a clearance for wildlife to still move freely
16 underneath, and also inside of the fence another -- a
17 landscape buffer about 25 feet inside the fence to
18 further separate development of the CLRDP from the
19 adjacent ranch.

20 In biological resources, as Steve mentioned,
21 there has been considerable effort in the CLRDP itself
22 to mitigate or to avoid and to prevent potential
23 impacts. There are some sensitive species, though, that
24 could potentially be present, and they include a
25 California red-legged frog, nesting raptors, and other

1 special status birds including black swift. And not to
2 oversimplify, but mitigation for any potential impacts
3 to those species would be mitigated by conducting
4 preconstruction surveys to determine whether they are in
5 fact present, and in the event that they are, to
6 implement measures that would avoid any disturbance,
7 particularly during breeding season.

8 And the third and final impact that was
9 identified as less than significant but for which the
10 University has pledged mitigation is potential
11 pedestrian safety impacts on the north side of Delaware.
12 And the University has indicated in its mitigation
13 measures that it provide a fair share of funding toward
14 the construction of a pedestrian path on that stretch of
15 Delaware.

16 And then, finally, the fifth component of the
17 EIR is the alternatives chapter. As I mentioned, the
18 emphasis in the alternatives chapter is to identify a
19 reasonable range of alternatives to the CLRDP and to the
20 individual near-term projects, with the emphasis on
21 looking at alternatives that would reduce or avoid one
22 or more of the significant effects of the project.

23 And the five alternatives that are identified
24 in the EIR and addressed and examined and compared to
25 the CLRDP itself and its impacts are a reduced program

1 alternative, which would reduce the net new research
2 space by about 42 percent, but would still occupy the
3 same general development areas that you see on this
4 third figure. That alternative was conceived at that
5 level so that it would avoid the traffic impacts that I
6 described earlier.

7 The second alternative is a modified land use
8 diagram alternative which would eliminate development in
9 the upper terrace, but would have the same overall
10 building program as the CLRDP as proposed.

11 The third is an increased program alternative
12 which would correspond to the original development
13 program envisioned for the campus, and that was an
14 overall program that would be about 18 percent in terms
15 of floor area or developed area larger than the CLRDP
16 that is now proposed.

17 The fourth would be a project-by-project
18 development alternative, essentially a no master plan or
19 no CLRDP alternative where individual projects would be
20 proposed as they came along and as funding was available
21 with no master plan or CLRDP.

22 And the final is one -- the final alternative
23 is one that is required by CEQA for all EIRs, a no
24 project alternative, which would simply mean that the
25 lab would continue to operate in the facilities it has

1 now. The uses could vary some, but the actual
2 facilities would not -- would not be increased.

3 CEQA does require that of the alternatives that
4 we look at, we identify an environmentally superior
5 alternative from among the alternatives and the reduced
6 program alternatives and say that would reduce the
7 traffic impacts, among others, would be that
8 environmentally superior alternative. And that
9 concludes the summary of the EIR.

10 Back to Frank.

11 FRANK ZWART: Thank you, Marty. As Marty said,
12 the details of all project impacts, project mitigation
13 measures and alternatives to the project are provided in
14 the Draft EIR. He noted that copies, free copies of the
15 Draft EIR on CD are available free of charge at the
16 University's Environmental Assessment Group offices at
17 515 Swift Street. It's available not only at UCSC's
18 McHenry Library on campus and the main branch of the
19 Santa Cruz City public library downtown, it's also
20 available at UCSC Science and Engineering library on
21 campus. And, finally, hard copies of the document are
22 available for purchase for the cost of duplication at
23 Kinko's in downtown Santa Cruz.

24 Again, the public review period will run
25 through March 19th, 2004.

1 As I said earlier, because the purpose of
2 tonight's hearing is to receive public testimony on the
3 Draft EIR for the project, staff will not answer
4 questions or react to public testimony tonight. The
5 Final EIR will include responses to all oral comments
6 received tonight and to all written comments received
7 during the review period. Thank you.

8 And I will start now to begin taking public
9 comments. I'll mention to those of you who arrived
10 recently, that we have asked anyone wishing to speak to
11 fill out a request-to-speak form available on the table
12 in the back. And I've got a couple of those now where
13 we'll start, and I will ask Alisa and Shabnum to collect
14 any that you might have, and we'll get you to speak in
15 the order in which I receive them. I will also take the
16 liberty of spelling any names that spelling might be
17 unclear of so that it goes into the transcript
18 appropriately. So the first request to speak is from Ed
19 Davidson, D-a-v-i-d-s-o-n.

20 ED DAVIDSON: I will be submitting written
21 comments as well clarifying some of the points and
22 details.

23 I have five areas of concern. The first, let's
24 take traffic. One of the issues that hasn't been
25 addressed, and it's only a recent issue, is the

1-1

1 potential for Lowe's and Home Depot to locate on
2 Delaware and what? Natural Bridges. I mean nearby.
3 And that becomes a cumulative traffic impact issue that
4 was not known when this was prepared, and there's going
5 to be a lot of concern about that issue when those 1-1
6 projects are discussed and coming up. And I question
7 whether we have to modify to consider the cumulative
8 impacts of this project, even though they are not
9 approved or they are only being proposed. One issue.

10 I have a concern about the trip assignment that
11 triggers the over three percent at the corner of
12 Chestnut and Mission. I would assume that because there
13 are many people -- I mean there are 42 housing units,
14 and I would push for more housing units on-site, but
15 those people are not going to be contributing to the
16 p.m. peak traffic because they live on-site and they 1-2
17 walk home from their jobs, and many of them will be
18 heading toward the UC campus rather than east along
19 Mission, so the question about how you manage the trip
20 assignment relative to the actual residents who will be
21 living on the campus site.

22 Now I get to some EIR issues. You are
23 requiring a buffer because of the dust problems alleged
24 by the farming neighbor. And I've been through all of 1-3
25 the earlier project proposals and EIRs, and that dust

1 nuisance is way out of scale from reality.

2 There is an odor nuisance because of the
3 fertilizer on the nearby residents, but the dust
4 nuisance is way overblown as a real issue, and your
5 proposed mitigations is way beyond what's necessary to
6 control the dust.

7 I'm suggesting that a living fence, such as a
8 chain-link fence with vines growing through it or
9 something like that, would be enough to control whatever
10 dust there is. And remember that you are putting a
11 16-inch animal travel at the base, so that allows the
12 dust through at the base. And if you have a solid-type
13 fence, the dust would go over the fence. So I don't
14 think that you need that complex a dust barrier.

15 One interesting thing. Now, geology mapping
16 and discussion, you only show the regional bay area
17 geology, and it misplaces the Ben Lomond fault. And I
18 suggest that you use -- you add the county's -- there is
19 a county geology map that shows the more precise
20 location of the faults. The Ben Lomond fault, I
21 believe, comes out just north of Woodrow, that's the
22 area of rapid erosion on West Cliff, and that is
23 probably the location of the Ben Lomond fault that has
24 this accelerated erosion, and that's less than a mile
25 from the site, and so we should have more updated

1-3

1-4

1 material on the seismicity from that fault.

1-4

2 Now my real issues have to do with the
3 wetlands. Wetlands W4 and W6 are barren and not
4 wetlands. W6 is this little I would call vernal pool.
5 It's really a little depression in the bluff area that
6 has no soil buildup, and it has no outlet, and it may be
7 a few inches deep and collects stormwater until it
8 evaporates. This W6 is so salty because of the constant
9 sea spray coming up onto the ground that any water, you
10 know, as it evaporates would be, you know, like the
11 great Salt Lake or something like that. It's just too
12 much salinity for most plants to grow, so it's barren by
13 definition and, therefore, it is not a wetlands in terms
14 of what anybody understands the meaning of wetlands to
15 be that need to be protected.

1-5

16 The other wetlands is W4, which is the ponding
17 behind the drop inlet at the wall of the swale that was
18 covered over by the wall separating the mobile home park
19 from the terrace point property. That drop inlet was to
20 a culvert carrying the water from the swale out through
21 the outlet on the far side of the mobile home park, and
22 that has been plugged up many years ago. It has been
23 plugged up and, therefore, there's ponding after a
24 storm. But this is and never was a wetland by anybody's
25 definition. It is shown as barren and it's shown as

1-6

1 requiring a hundred-foot buffer around it, and really
2 what it is is just this plugged-up culvert from the drop
3 inlet. So it should not be listed as a wetland. It has
4 none of the characteristics of a wetland.

1-6

5 And there is another factor which you don't
6 have as a mitigation, but in the plan itself they talk
7 about a requirement for filters for that drop inlet and
8 improved drainage controls, and that makes no sense as
9 long as that culvert is plugged up. And I think that a
10 mitigation should be the requirement that the culvert be
11 unplugged. That is part of the mobile home park's
12 original permit approval, they improve the drop inlet in
13 putting this little volume of water into the culvert, it
14 was that the culvert remain open and it was improper to
15 have plugged it up in the first place, and I think that
16 should be a requirement of this project is to unplug
17 that culvert.

1-7

18 And now, finally, I have questions about the
19 special status of three of the species that you list.
20 One is the Northern harrier, which most people would
21 call a marsh hawk. It is a bird that is found in all 48
22 states as well as Alaska, all of the -- well, all of
23 Canada, with the exception of the Hudson Bay area and
24 most of Mexico. This is not an endangered species.
25 This is a common species. And the special status that

1-8

1 is cited by the Fish and Game is that it is subject to
2 the Migratory Bird Act because it goes across the
3 Canadian border and so on, and those restrictions on the
4 Migratory Bird Act did not raise this species to a
5 special status that would require any particular
6 environmental protection. So that status just says 1-8
7 under the Migratory Bird Act, any bird that crosses the
8 Canadian border in its migratory patterns, you can't
9 kill them, you can't sell their eggs or whatever. It's
10 like ducks, you have to have permits to kill them.
11 That's the entirety of the special status.

12 The red-legged frog, which is common from the
13 Mexican border to the Canadian border on the Pacific
14 Coast, including all of Puget Sound and the Central
15 Valley of California, was by a federal judge removed
16 from the special status. The critical habitat 1-9
17 designation was thrown out by a federal judge about a
18 year ago, year and a half ago. This never was a
19 threatened species, and I hope that if it has not yet
20 been de-listed, that it will be soon. So you don't need
21 to fuss so much about the red-legged frog.

22 Now the snowy plover is also one that is found
23 on the West Coast from the Mexican border and going down
24 into Baja up to Puget Sound, as well as the coast -- the 1-10
25 Gulf Coast, Texas to Florida, are nesting sites for this

1 species which was listed as threatened. And I don't
2 have any problem with protecting any nesting sites when
3 they are found that occur, because these birds, you
4 know, they only have 30 miles of Santa Cruz coastline to
5 find their nesting sites and, you know, another 1500
6 miles of coast between Mexico, Washington, Florida and
7 so on. I think it's exaggerated that this is a
8 threatened species, but that's going to be adjudicated.
9 There is a case pending.

1-10

10 Those are my issues. Thank you.

11 FRANK ZWART: Thank you, Mr. Davidson.

12 The next speaker is Victor Roth, R-o-t-h, of
13 California State Parks.

14 VICTOR ROTH: Yeah. Thank you. My name is
15 Victor Roth; I'm with California State Parks, Santa Cruz
16 District.

17 California State Parks has one concern on the
18 project that deals with the scenic and visual resource
19 policies of the plan. Specifically in Section 5.4.2 of
20 the plan policy, 4.1 states that the University will
21 site new development at the breeding center in a manner
22 that protects view corridors as depicted on Figure 3.16,
23 which you have over there. We feel this is inadequate.
24 We feel one of the major scenic and visual view
25 corridors of regional significance has been missed;

2-1

1 that's the view corridor going directly up the coast,
2 directly along the coast to Wilder Ranch.

3 For any of you that have hiked the Ohlone bluff
4 trail of Wilder Ranch, you should know that this
5 facility and any future development here can be seen for
6 miles and miles and miles up coast on that very
7 important scenic coastal trail. We would suggest that
8 this could be easily mitigated by merely expanding your
9 mitigation measures to include some sort of landscaping
10 plan that would buffer the sides up the coast, the
11 westerly side of the development. We think the planting
12 of a number of sizable trees would go a long, long way
13 to buffering this facility as seen from some very scenic
14 areas of Wilder Ranch State Park. Thank you.

15 FRANK ZWART: Thank you, Mr. Roth.

16 I have four more request-to-speak forms. Are
17 there any more coming? I want to make sure people have
18 adequate time. Five?

19 Okay. I don't think we're in a position to
20 impose a time limit at this point, so we should have
21 adequate time for everyone.

22 The next speaker is Renwick Curry.

23 R-e-n-w-i-c-k C-u-r-r-y.

24 RENWICK CURRY: That's Scottish, so the name is
25 Rennick.

2-1

1 FRANK ZWART: Rennick, excuse me.

2 RENWICK CURRY: No worry. Everybody says it
3 that way.

4 I want to comment about the wetlands report. I
5 represent Terrace Point Action Network. We have been
6 very active in monitoring the activities that Terry
7 Huffman talked about earlier this evening. In fact, it
8 was just three years ago that Terry Huffman stood in
9 this very room and said: All you need to create a
10 wetland is that you have water ponding seven days after
11 a rainfall.

12 Now here it is three years later; we find out
13 that's not enough. Even water ponding 10 days after
14 rainfall isn't enough, or even 14 days after a rainfall.

15 We submitted many photographs to show this
16 ponding. I have some examples here. We submitted these
17 to show that there was ponding after rainfall, and in
18 his report he says that -- well, he criticized some of
19 these photographs because he said it was taken within
20 seven days of a two-and-a-half inch rainfall. Now it
21 turns out that's wrong for two reasons. One is, the
22 consultant uses rainfall up at De La Viega weather
23 station instead of the one right overhead here at Long
24 Marine Lab. The Long Marine Lab rainfall, which is
25 obviously more accurate, is only one inch.

3-1

1 Also, he says that the picture was taken within
2 seven days. It turns out that it was more than seven
3 days, because the rainfall stopped at seven o'clock in
4 the morning, as also shown by the rainfall data here,
5 and we took pictures seven days after that.

6 Our data were also criticized because they were
7 taken after a, quote, above-normal rainfall in December
8 of 2001. Now it turns out, of course, half the time you
9 do have an above-normal rainfall. However, December
10 2001 was a little bit more than normal. However, the
11 consultant completely ignored the analysis that we
12 presented that showed December 2001 in terms of rain
13 season months was actually at the 85th percentile. So
14 it's not at all that unusual to have the rainfall we had
15 in December of 2001. In fact, if you consider all the
16 rainy season months, we should get a rainfall like that
17 about every year or so.

18 In the wetlands report it says that wetland W7,
19 which is the one in the upper northeast corner, is a
20 non-ESHA wetland. That probably comes as a surprise to
21 many people that there should be such a thing. A non-
22 ESHA wetland. In fact, I spoke to a Coastal
23 Commissioner and asked the question, "What is a non-ESHA
24 wetland?" This coastal commissioner said, "I have never
25 heard of such a thing." But we have it here.

3-1

3-2

1 The consultant's report says that this non-ESHA
2 wetland should be protected, but it appears to be that
3 the laydown area, the development north of Terrace Point
4 is lying right on top of this non-ESHA wetland. And so
5 my question is: What protection is being given to this
6 non-ESHA wetland?

3-2

7 Now if that is a non-ESHA wetland, we have a
8 question as to why there is not a wetland inside the
9 elbow of the curve when it transitions from Delaware
10 Avenue around to McAllister? The ponding pictures we
11 have here show major ponding 7, 10 and even 14 days
12 after a rainfall. The consultant says there is wetland
13 vegetation in that area. And there's even a report on
14 page 33, attachment 11A, that says there is saturation
15 through the major part of the root zone. So my question
16 is: Why aren't these sampling points, which are number
17 58 and 59? It seems to me they should be considered
18 wetlands as well.

3-3

19 We will follow this up with written
20 documentation and further comments. Thank you.

21 FRANK ZWART: Thank you, Mr. Curry.

22 The next speaker is Grey Hayes, G-r-e-y
23 H-a-y-e-s.

24 GREY HAYES: Good evening. I've been
25 representing the Sierra Club through many of these

1 meetings and at meetings outside these meetings. And we
2 will go into more detail about some of the stuff I say
3 next in writing, but I wanted to give you an overview
4 tonight.

5 The first thing I would like to raise is our
6 concern about ESHA, Environmentally Sensitive Habitat
7 Areas, here at the site. One thing that has been
8 overlooked by the plan is the fact that the grassland,
9 wetland scrub matrix here should be considered ESHA. In
10 other cases, it has been in the coastal zone, very
11 similar habitat. Here it supports a very large
12 population of rodents. These in turn provide important
13 habitat values for large numbers of sensitive raptor
14 species. The report notes White-tailed Kites, Peregrine
15 falcons, Merlins, Burrowing Owl, Northern harrier. We
16 know of very similar situations in Santa Barbara where
17 the Coastal Commission deemed almost identical habitat
18 as ESHA, and we would support that designation here.

19 And then I have a number of issues with the
20 wetlands report. First of all, we disagree with
21 Mr. Huffman's characterization of saturated soils. You
22 will note in the Phase III portion of the wetlands
23 delineation the inclusion of a new category of soil
24 saturation termed very wet. We also note that it was
25 during this phase that the first quantitative

4-1

4-2

1 methodology was used to look at soil saturation, and
2 this quantitative methodology discounted the very wet
3 category as potentially saturated.

4 How many, I ask, of the soil samples in Phases
5 I and II that were qualitatively determined to be W or
6 wet would have indeed been very wet if they had used the
7 same category earlier, and thereby these wet soils would
8 have been considered saturated? Overall, I and others
9 witnessed Dr. Huffman typifying soils, and we expressed
10 our disagreement with his qualified wet determination
11 since the soil seemed saturated to us.

4-2

12 And so the question is: What percentage of
13 Phase I and II wetland delineations were -- soil
14 delineations were indeed saturated? Why were no
15 statistical analyses used to compare the quantitative
16 and qualitative soils data to indicate the level of
17 confidence we could have on the qualitative
18 determinations on Phase I and II? And, finally, would
19 it be possible to test these data for the Final EIR?

20 Another issue here: Also we have called for
21 chemical- and/or instrumental-based methodologies for
22 testing the redox potential of the soils at the site,
23 but these methodologies were discounted in the report.

4-3

24 We indeed used these methodologies ourselves
25 and found reducing soil conditions well outside of the

1 wetlands delineated in the plan. And so I ask: Why
2 were these methodologies not employed?

4-3

3 We disagree with the description of
4 California's growing season in the report which was used
5 to calculate the legal saturation period. Now,
6 biologists in my field generally agree that in our
7 Mediterranean climate we have a growing season limited
8 to the winter and spring seasons when there is
9 sufficient soil moisture to support plant growth. So my
10 question here is: Is it standard protocol to define
11 California's growing season as year-long?

4-4

12 Another issue: We disagree with the analysis
13 of historical photos in looking at wetlands at the site
14 and ask: Why were areas in the historic photos that are
15 clearly historic drainage areas not given higher
16 consideration as wetlands?

4-5

17 Again we note and are perplexed, as Ren said,
18 by the inclusion of a non-ESHA wetland at the northeast
19 portion of the site. The questions here being: Is
20 there precedent in the coastal zone for non-ESHA
21 wetlands? If not, what makes this wetland so special?

4-6

22 Another issue: We note that some degree of
23 loss of wetlands at the site has a very high likelihood
24 to have been caused by draining these wetlands through
25 the placement of a large utility line through the middle

4-7

1 of the property. This is exactly what we've seen
2 developers do throughout the State of California, which
3 is to ditch the middle of the property, sometimes fill
4 it with gravel, and then cover it over with soil. This
5 is a sure method of draining wetlands. So we have asked
6 for an analysis of this impact, but these have not been
7 forthcoming. Could the placement of this utility line
8 have indeed drained wetlands? If so, why does the
9 University -- why does not the University mitigate for
10 this impact?

4-7

11 Another issue: We disagree with the conclusion
12 that *Baccharis douglasii* is not acting as an obligate
13 wetland species. We have surveyed a number of experts,
14 herbaria records and other accounts that support its
15 designation as an obligate wetland species. We will
16 submit this report in written comments.

4-8

17 Instead, we in turn ask: Is it not possible
18 that the upland species, at least some of them at the
19 site, are either incorrectly classified? I note that
20 many botanists note that coyote-bush is indeed and often
21 occurs in wetlands and could be affecting wetland
22 species. Or, conversely, are these upland species not,
23 in Mr. Huffman's words, acting as upland species at this
24 site?

25 Another comment: The project proposes to

4-9

1 create several ponds on the site. Ponds to me and to
2 most of us sound like wetlands. How will these created
3 wetlands be protected, buffered, and, more importantly,
4 considered under wetlands laws?

4-9

5 Considering that these areas will need to be
6 managed, what permits will be required to do this
7 management work?

8 The project also proposes to use vegetative
9 buffer strips and grass-lined waterways. This is an
10 issue we have raised since the beginning.

11 What research has determined the efficacy of
12 these measures in Mediterranean climates? I know of
13 some research that has cast doubt on these practices
14 from work near the Elkhorn Slough. That research
15 suggests the need to harvest biomass, at least, if these
16 areas are expected to help with nitrogen non-point
17 source pollution.

4-10

18 So the questions are: Will biomass indeed be
19 harvested from these swales? At what rate? How will
20 these trash piles be disposed of? And how will
21 harvesting of this biomass impact sensitive species?

22 Finally, on the wetland issues I ask: If this
23 current wetland delineation, if the methodology used for
24 this wetland delineation is adopted, what will be the
25 cumulative impacts of loss of similar habitats in

4-11

1 coastal California because of similar permitting? 4-11

2 On other matters: We disagree with the
3 University's mitigation measures for growth inducement 4-12
4 potential of this project. Why has the University, as
5 has been discussed, not considered placing a one-foot
6 wide conservation easement on the western edge of this 4-13
7 property to prevent extension of utility lines and roads
8 to the west?

9 On the hydrological models for runoff, we
10 disagree with the runoff models and would like to ask:
11 How conservative are the models' assumptions? How will 4-14
12 the assumptions change when the vegetation on the site
13 is restored and managed as indicated on the plan?

14 With runoff data and the wetlands data, we
15 would appreciate overall and throughout the plan the
16 reporting of statistical analyses that can let us know 4-15
17 the level of confidence of their calculations. Is this
18 possible?

19 Another thing that I would like to note,
20 Dr. Wayne Ferren in Santa Barbara has done extensive
21 survey of the coast. He notes that wherever ponds are
22 found this close to the coast, they are associated with 4-16
23 geologic faults. We have a pond out here, and yet,
24 again, no mapping of faults, no detailed mapping of
25 faults. There are others that have done detailed

1 mapping of faults with the USGS at this site and these
2 data do not appear in these reports, and we would
3 request they are included in the future Final EIR or
4 other reports.

4-16

5 There is a UCSC toxicology professor that has
6 noted high levels of DDT and DDT breakdown products in
7 the air, in dust at this site. We ask: What will these
8 toxins -- how will these toxins affect residents at
9 housing and at facilities here?

10 We also note that there are high levels of DDT
11 and DDT breakdown products in the soil at this site such
12 that the University could not dispose of soil excavated
13 from underneath these buildings off-site. It was
14 considered toxic waste, and they had to pile it up on
15 a berm on the edge of Younger Lagoon Natural Reserve
16 where it threatens the natural species of the lagoon.

4-17

17 So the question in the future, of course, is:
18 With the excavation and moving soils about on this site,
19 how will that soil be disposed of? And what will the
20 impacts of DDT-laden soil be on the natural biota in the
21 future on these managed and historic wetlands?

22 Finally, the Coastal Commission supports
23 coastally-dependent construction. 85 percent of the
24 National Marine Fishery Service building here is not
25 coastally dependent. The USGS building indeed is also

4-18

1 not coastally dependent. I respect very highly
2 Dr. Gregg's value of creating a community of
3 researchers. This has been valuable at the University
4 of California at Santa Cruz and has helped a number of
5 conservation efforts in the area; however, this area is
6 too special, I believe, to create a community because of
7 the sensitive species here.

8 If you flip this on its head, you say, well,
9 how about creating a community of recreation theme park
10 managers down next to downtown? There's lots of people
11 who would like to have their comrades working together
12 in these valuable coastal zones, but very little
13 evidence that this is actually needed, especially when
14 such sensitive resources are at risk.

15 We support research and preservation of natural
16 resources both. And know that both are possible here,
17 as long as this project is limited to truly coastally-
18 dependent uses, and we urge that for the benefit and
19 long term of the University researchers that that be
20 focused upon in this project and that an alternative
21 that considers coastally-dependent University-based
22 research be included in the Final EIR. Thank you very
23 much.

24 FRANK ZWART: Thank you, Mr. Hayes.

25 The next speaker is Kim Hayes, K-i-m H-a-y-e-s,

4-18

1 for the Santa Cruz Chapter for the California Native
2 Plant Society.

3 KIM HAYES: Thank you. Good evening everyone.
4 I would like to state that the California Native Plant
5 Society Santa Cruz Chapter will also be submitting
6 written comments.

7 As a volunteer in a conservation organization,
8 I'd like to say that it's going to take a few more weeks
9 to get through the couple inches of this document, so
10 forgive me tonight for not having as detailed of a
11 presentation and questions that I would prefer to have.

12 I don't know if anybody can answer this
13 question tonight, but I would actually just like to
14 start off by trying to find out what time did this
15 meeting start? I thought that this was supposed to be a
16 six p.m. meeting. Did I have that wrong?

17 FRANK ZWART: It started at six p.m.

18 ALISA KLAUS: At six.

19 FRANK ZWART: The public hearing started at 6
20 p.m.

21 KIM HAYES: There was information important for
22 tonight discussed prior to six p.m. then?

23 FRANK ZWART: Background information. Not part
24 of the hearing. And that was advertised at the same
25 time.

1 KIM HAYES: Okay. Thank you. Just checking.

2 When I came in, Steve Davenport was discussing
3 the acreage of development for the proposed development
4 out here, and he mentioned 2.5 -- roughly 2.5 times the
5 present development. These are very different numbers
6 than when I calculate this out that, yeah, the Draft EIR 5-1
7 here states 108,604 total existing gross square feet.
8 When you look at the proposed development, it's a little
9 bit more than 2.5 times greater. So I think we need to
10 be clear on our math when we are talking to the public
11 about this.

12 Okay. What I would like to get into is at
13 least discussion of some of the environmental impacts
14 that in my opinion and the California Native Plant
15 Society's opinion are more than insignificant. This
16 would be starting with development on what is annual
17 grassland coastal scrub. I think it's unclear to some
18 folks how valuable and important this initial coastal
19 terrace prairie habitat is. Even though it has been 5-2
20 prior developed and farmed, it's very rare habitat that
21 could -- is remaining and has high restoration
22 potential. If you think of most of Santa Cruz County,
23 whether you are going to the north of here or the south
24 of here for discussion purposes, even though we know
25 that might not be the right directions, the properties

1 to the north are basically agricultural lands. What's
2 remaining of the initial coastal terrace habitat are
3 fringes on the coastal bluff. The rest is destroyed.
4 It's an ag. It's been interpreted in this present day
5 as having a different value, and that is food
6 production. If you look to the south of here, it is
7 housing and development of businesses, et cetera.

5-2

8 There was a discussion in here of development
9 on and restoration of annual grassland and coastal scrub
10 could cause a loss of nesting raptors that may be
11 present. I would like to underline and exclamation
12 point "that may be present." This would be caused, they
13 say, the disturbances, by ground disturbance noise and
14 activity. They say nesting raptors are limited. This
15 means they do occur on this site and are -- the
16 development activities out here would not really be a
17 problem due to abundant alternate and protected habitat
18 in the region.

5-3

19 Well, I beg to differ that. The initial
20 coastal terrace prairies have primarily been developed.
21 This is a very important remaining piece of habitat. I
22 actually have an interesting vantage point to speak
23 from, as I spent five years taking care of Younger
24 Lagoon and being intimately aware of what is happening
25 out here with wildlife, plant species, and I know very,

1 very well that this proposed development site is not of
2 low value, but it is of very high value. And I
3 particularly value the species that need this place, and
4 I think that this EIR does not do justice to take care
5 of their needs. And I would like to actually question
6 the consulting company's assessment and guidance to the
7 University on these points.

5-3

8 When the only environmental impacts of
9 biological resources are stated as California red-legged
10 frogs, nesting raptors and nesting black swifts, once
11 again I want to state that I find this absolutely
12 unacceptable from the standpoint of any biological
13 opinion. We have native habitat. Yes, there are weeds
14 out there. Yes, it is impacted. It's native habitat.
15 There are plant species that are uncommon to find,
16 especially in the agricultural lands and the developed
17 lands around us.

5-4

18 The California Native Plant Society has come up
19 to an opinion that we do not have to stay focused
20 primarily on rare plant species, but we are okay to talk
21 about habitat value that California native plants
22 provide for wildlife. And so I would like to stress
23 that although this is a, yes, impact site, it is also of
24 value and there are native plants out here. There are
25 sensitive habitats, wetlands, and there are sensitive

1 species that do use these and need these and building
2 tops will not suffice for perching grounds.

5-4

3 There was nothing mentioned about changing
4 hydrology to the coastal terrace prairie, the
5 jurisdictional wetland out here, the ESHA's destructions
6 of native plant habitat, wildlife habitat.

5-5

7 One of the project objective states to maintain
8 and enhance the natural resources at Younger Lagoon. I
9 would like to find out exactly how. With the impacts of
10 added development out here -- just imagine a wet sponge.
11 Squeeze that. The water goes someplace. It doesn't
12 just stay in the sponge; right? Add all the hundreds,
13 500-some thousand square feet of new development out
14 here. What's going to happen to this wetland habitat?
15 It's going to leak out. It's going to push out. That
16 water is going to go somewhere.

5-6

17 Well, we've already heard tonight about some of
18 the ponding areas and how those managements will be
19 handled. That's a good question. There is also the
20 question of what's going to happen to the water as it
21 goes over into Younger Lagoon. I'm aware of a couple
22 locations where water goes over into Younger Lagoon, and
23 there's some significant erosion that's already
24 happening, partially due to the new structure that's
25 inland from us here. And just what will happen with all

5-7

1 the rest of what's proposed? I think some serious
2 problems for Younger Lagoon, and not to mention the
3 draining of the wetlands out here further.

5-7

4 There was discussion of trying to avoid or
5 minimize adverse effects on the natural physical setting
6 where it's feasible consistent with the Coastal Act and
7 other environmental regulations. I would like to remind
8 folks that in the document there was discussion that the
9 environmentally superior alternative is the no project
10 alternative.

11 Under CEQA, it gives the developers the, I
12 would say, very -- you are lucky to have this
13 perspective. I will say that that's not enough. You
14 get to propose your next best alternative, and so that
15 would be a reduced footprint. Well, remember, number
16 one, is no project, and that's for some very important
17 reasons, many of which are environmental, and they are
18 things that affect the human health around here.

5-8

19 If the University has high values and
20 scientific merit, I find it offensive in fact to look at
21 the proposed development, and I would like to see the
22 University work harder on trying to actually propose
23 environmentally sensitive development for environmental
24 studies.

5-9

25 Protection of ESHAs. There have been many

5-10

1 different wetland delineations for this site, some of
2 which the University has supported, some that
3 independent people have tried to present, because this
4 is such an important and sensitive issue. From my
5 vantage point, it appears the University has not chosen
6 to take the largest acreage definition of wetland out
7 here based on wet years, a year that's very, very good
8 to do wetland delineation, timing that's good to do
9 wetland delineation.

10 And I would like to ask, from the standpoint of
11 the California Native Plant Society trying to protect
12 wetland habitat, why the University feels it's
13 acceptable to choose a small definition? Clearly there
14 are assumptions that I could make that it facilitates
15 the largest amount of development possible, but I would
16 like to think that there may be some other reason.
17 However, it wouldn't matter, because the largest acreage
18 -- the largest wetland delineation is what would be
19 reasonable and responsible to try to pose any
20 development around it.

21 I think I will leave my comments at that for
22 tonight. Thank you very much.

23 FRANK ZWART: Thank you.

24 The next speaker is Aldo Giacchino, A-l-d-o
25 G-i-a-c-c-h-i-n-o.

5-10

1 ALDO GIACCHINO: Thank you. I will try to
2 avoid repeating anything -- some of the things that have
3 already been said.

4 What I would like to concentrate a bit on is
5 the density of this development. When you look at your
6 land use diagram, visually you can see that this
7 development, the proposed development with the existing
8 development, will have a tremendous impact. It has the
9 visual impact of being more than 50 percent of the site,
10 which is not in the lagoon. The lagoon is clearly
11 something separate and distinct from the rest of the
12 site.

13 I think that for something that is on the
14 coastal bluff, it is grossly exaggerated. It is -- when
15 you look at the present development, at the existing
16 development on this site from West Cliff Drive, which is
17 a major, major tourist and coastal enjoyment site, when
18 you look at this site from there and when you look at it
19 from the park to the west of here, the site already
20 looks like an industrial site, and yet you are proposing
21 to more than double the visual impact of what is now
22 here.

23 It is a gross exaggeration, and it is really a
24 major disruption to the coastal impact for people who
25 use this stretch of the coastline, which is a very large

6-1

1 number of people -- not on the site, but in and around
2 Santa Cruz.

6-1

3 I would like to also repeat the fact that this
4 development, the massiveness of this development will
5 undoubtedly become a magnet for additional development
6 to the west of here. You will put the agricultural land
7 to the west of here under development pressure, which is
8 a totally undesirable feature and not part of the
9 current plans for this area. So this construction will
10 be very disruptive to the -- to the development plans
11 and the long-range plans for Santa Cruz.

6-2

12 I would also like to hit again the item that
13 was mentioned by the first speaker, which is the traffic
14 impact and the fact that it has to be considered not
15 only in terms of the additional developments that will
16 be in the immediate vicinity of this site which are
17 being proposed, which are the Home Depot, the Lowe's
18 megastores, another megastore already developed,
19 Safeway. And when you add to those major facilities,
20 all which will impact Mission Street and the
21 intersection that serves this area or the intersections
22 that will serve this area most directly, in addition to
23 those, there is the fact that the campus on the hill is
24 continuing to develop and will continue to develop in
25 the next 20 years. There is already additional housing

6-3

1 being proposed there, which is a good thing. But it is
2 important to recognize that the cumulative impact of
3 this site has to be taken in the context of what else is
4 happening. What else is happening includes a large
5 number of things that are coming together and impacting
6 the west side and Mission Street in a tremendous way,
7 and it is -- it is really prevarication to merely deal
8 with the impact generated by this site. It is an
9 illusion that needs to be overcome.

6-3

10 The last point that I would like to mention is
11 that I didn't have a chance to see in the plan, because
12 I couldn't get to that point, the proposed treatment for
13 public access to Younger Lagoon. It's public access.
14 It is a public place. The University has locked it off.
15 The University cannot make a coast, a piece of the
16 coastline an interdictive place. Public has to be made
17 available to that side and to this side, all of it, and
18 without any restrictions, because it was significant to
19 these sites to the users of this area. And those are my
20 principal points. Thank you.

6-4

21 FRANK ZWART: Thank you.

22 The next speaker is Ron Swenson, R-o-n
23 S-w-e-n-s-o-n.

24 RON SWENSON: Good evening. I'm Ron Swenson.
25 I'm the neighboring property owner. I began by looking

1 at Figure 3.7 in the document, the draft document. And
2 as I started out, I noticed that right off the bat that
3 the orientation of buildings and the location of
4 buildings created some difficulties even for the plan as
5 stated.

6 If you read page 416-16, there it says that the
7 designs for the new buildings would follow an
8 appropriate building technique, such as passive solar.
9 As I look at the buildings, similar to the building we
10 have right here, the orientations are generally in the
11 opposite direction of what makes the best sense from
12 that standpoint.

13 So if I look at the overall site, I would say
14 that the siting of buildings with major access going
15 north/south is in contradiction to the plan as it's
16 stated. The major access in this part of the world
17 would be appropriately east/west for virtually all
18 buildings. This would not only be from the standpoint
19 of energy conservation, but it would also involve
20 comfort and things like noisy fans that we see in a
21 building like this which would be passively solar heated
22 and cooled maybe 360 days a year. So if you look at
23 this building, knowing that the ocean here is to our
24 south, you will notice that there is no way that you
25 could put solar water heaters as stated in the plan or,

7-1

1 for that matter, affordable tanks or other mitigation
2 measures against energy costs or energy wastefulness as 7-1
3 is the plan trying to do.

4 Now, as I look at the portion of the plan
5 that's adjacent to our property, I notice that it
6 contrasts quite a bit with the other properties'
7 neighbors which would be over closer to where we are now
8 along the side by De Anza Park. There's a large setback
9 which provides some kind of a buffer with the existing
10 housing. Considering that we have uses in mind besides
11 the weeds are growing now on our property in the
12 homeless garden, we think that a 15-foot setback is 7-2
13 totally inappropriate and that it would be appropriate
14 to adjust the character of the usage adjacent to our
15 portion of the property to be more in keeping with the
16 character of the rest of the site. A shared campus
17 warehouse and laydown area would have night lights that
18 would conceivably be a distraction for the neighbors and
19 things like that. But, furthermore, since the buildings
20 are oriented incorrectly from the standpoint of energy
21 conservation, that at least needs to be considered early
22 in the scheme of things.

23 There's a discussion of a wildlife corridor. I
24 would like to discuss this further. Our staff has been 7-3
25 talking to people about this, so I presume that we can

1 have a wildlife corridor that not only conforms to the
2 requirements for your property but for our property as
3 well.

7-3

4 I would just like to have some further
5 discussion before I write my comments formally so that
6 we can see if there can be a meeting of the minds before
7 we go too much further. So I would like to know who in
8 the University would be the appropriate person to
9 discuss particularly these areas. If someone could lay
10 that out for me in due course, I would appreciate that.

11 I think those are my comments for now. Thank
12 you very much.

13 FRANK ZWART: Thank you.

14 Next speaker is Don Croll, D-o-n C-r-o-l-l.

15 DON CROLL: Thank you. I'm here as a faculty
16 representative for the Younger Lagoon Reserve. I just
17 wanted to make a couple of comments to make sure that
18 the University keeps these things in mind as they move
19 forward.

20 I know that some of these things have appeared
21 in the EIR, but I just wanted to reiterate the
22 importance that the Younger Lagoon Reserve is for the
23 University campus in particular, but also for research
24 in general, and I just wanted to make sure that the
25 University works hard to make sure that the Younger

8-1

1 Lagoon is maintained intact as an important area for
2 research and actually for conservation, and that means
3 protecting the area from extensive increases in public
4 access, which goes contrary to I think the comments of
5 one of the earlier speakers here.

8-1

6 Second thing I wanted to do is make sure that
7 the University directly assesses the impacts of the
8 increased development on the Younger Lagoon water
9 system, the groundwater, the outflow that the previous
10 speaker talked about, how is that going to impact the
11 lagoon? That is addressed to a certain degree, but I
12 think it's important to make sure that that's addressed
13 and mitigated to the best extent possible.

8-2

14 And one of the other -- one of the things that
15 I have not found well addressed in previous development
16 with the -- here on campus is native plants and the use
17 of landscaping in terms of the actual -- the developed
18 core. I think that there's a lot of things that
19 could probably be better done with regard to the
20 previous developments; for example, on the federal land
21 that was developed earlier, the imposing bidder, native
22 plant landscaping would be really important, I think, to
23 make sure that that's actually designated in the -- as a
24 potential mitigation for the development.

8-3

25 And also thinking about diminishing as much as

8-4

1 possible impervious water surfaces to diminish the
2 amount of water runoff into the lagoon would be really
3 critical. So those are just things I wanted to mention.

8-4

4 FRANK ZWART: Thank you. I have no more
5 request-to-speak forms, so I will see if there are any
6 floating around there. And seeing none, I will adjourn
7 this hearing. Thank you all for your attendance and
8 participation. Thank you.

9 (Time Noted: 7:20 p.m.)

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C E R T I F I C A T E

I, KELLI A. RINAUDO, do hereby certify that I am a Certified Shorthand Reporter, CSR No. 6411 RMR/CRR, in and for the state of California;

That said hearing was taken at the time and place set forth, and the testimony of the proceedings was reported by me and was thereafter transcribed by computer under my direction into booklet form;

That I am a disinterested person, not being in any way interested in the outcome of said action, nor connected with nor related to any parties in said action, or to their respective counsel, in any manner whatsoever.

Executed March 2, 2004.


KELLI A. RINAUDO, CSR #6411 RMR/CRR

PUBLIC HEARING TRANSCRIPT

COMMENTER PH-1: ED DAVIDSON

PH-1-1: See the response to comment LA-2-1.

PH-1-2: See the response to comment ORG-3-12.

PH-1-3: Comment noted. See the responses to comments I-2-4 and I-3-1.

PH-1-4: See the response to comment I-2-5.

PH-1-5: Based on the analysis of hydrology, soils, and vegetation data presented in the Huffman-Broadway Group's (HBG's) January 2004 report, HBG determined that W4 and W6 are wetlands per U.S. Army Corps of Engineers (ACOE) and California Coastal Commission (CCC) wetland definitions and delineation criteria.

PH-1-6: Based on the analysis of hydrology, soils, and vegetation data presented in HBG's January 2004 report, HBG determined that W4 is a wetland per ACOE and CCC wetland definitions and delineation criteria. The fact that the culvert at the De Anza Santa Cruz residential community is plugged would not affect W4 being delineated as a wetland (i.e., it would be considered a wetland irrespective of whether the culvert is plugged or not) because ACOE and CCC guidelines require wetland delineations to be based on existing site conditions. HBG found wetlands to occur within the Terrace Point site wherever surface and/or near surface (upper 12 inches) had been blocked or partially blocked.

PH-1-7: The repair of the stormwater drainage pipe to the De Anza Santa Cruz residential community is included in the capital improvement program. See Section 9.4.1 on page IX-6 of the CLRDP. See also the response to comment I-2-7.

PH-1-8: The northern harrier is designated a Species of Special Concern (hence a "special-status" species) because the state agency with statutory responsibility for wildlife resources (California Department of Fish and Game) has determined that populations of the northern harrier are declining. In the case of the harrier, only nesting pairs have this status, and this designation has little to do with the Migratory Bird Treaty Act. The red-legged frog subspecies at the project site and the snowy plover (western coastal population) have been federally listed under the Endangered Species Act for many years, although it is true that there have been legal actions to change their classification and associated critical habitat.

PH-1-9: See the response to comment PH-1-8.

PH-1-10: See the response to comment PH-1-8.

COMMENTER PH-2: VICTOR ROTH

PH-2-1: Section 4.1, Aesthetics, of the Draft EIR evaluates project impacts on the short-range view from the Natural Bridges State Beach parking area, the medium-range view from the Wilder Ranch State Park beach area, and long-range views from the Wilder Ranch State Park parking area and upper ridge.

The Draft EIR concludes that CLRDP development would not have significant effects on these scenic vistas for a variety of reasons, which are explained in the analysis on pages 4.1-31 through 4.1-34 of the Draft EIR. Generally, these reasons include CLRDP height limitations and design guidelines that would help to ensure that new buildings blend in with their surroundings, the small scale of the buildings in longer-range views, the proposed clustering of development and preservation of open space, and existing and proposed landscaping that would block or soften views of the site. Note that the visual simulations do not show this landscaping. Please refer to the Draft EIR for detailed discussion of existing and future views from each vantage point.

Since the Draft EIR concludes that CLRDP development would not have significant impacts on views from these state parks, mitigation is not required. However, future development on the site would include landscaping along the lines suggested by the commenter. The landscape design guidelines included in the CLRDP (design guidelines chapter) include provisions for planting of trees in strategic locations associated with building groupings, use of landscaping to reduce the perceived scale of larger buildings, and planting of closely spaced trees to protect the site from prevailing westerly winds. The CLRDP calls for wind protection and windbreaks, which can be located to reduce visual impacts from specific viewpoints (illustrated conceptually in CLRDP Figures 4.14 and 4.18).

COMMENTER PH-3: RENWICK CURRY

PH-3-1: The station used to determine the precipitation curves for this project is an official station used by the National Oceanic and Atmospheric Administration (NOAA), Western Regional Climate Center (WRCC), and California research stations. In addition, the station has an extended historical record, which was used to calculate precipitation event frequencies. The UCSC rainfall station is not a NOAA rainfall station, and the data collected at this station have not been subjected to quality control and assurance. Discussions with Rob Franks of UCSC indicate that there are missing data as well as nonsensical data in the record.

The ponding observed occurred during above-normal rainfall conditions and, in accordance with Corps methodology, was discounted.

PH-3-2: As described in HBG's January 2004 ESHA analysis and buffer recommendations letter report, the Malibu Local Coastal Program Land Use Plan and Community Hospital of the Monterey Peninsula case (Application No. 3-03-068 & 3-03-101) provide precedent for the CCC to decline to designate areas that otherwise would meet the definition of an Environmentally Sensitive Habitat Area (ESHA) due to their being degraded, fragmented, or isolated such that

long-term habitat viability is compromised. HBG believes W7 may warrant such treatment because it is small; has limited functional capacity; does not contain any rare or especially valuable plant/animal species; supports little, if any, wildlife usage; and has questionable long-term habitat viability. No protection is proposed for this area. See also the response to comment SA-3-1.

PH-3-3: Surrounding soils lacked strong evidence of wetland hydrology consider the period from January 30 to April 16, 2002. The same finding resulted upon review of data collected in 2003.

COMMENTS PH-4: GREY HAYES

PH-4-1: As described in HBG's January 12, 2004 letter to Dr. Charles Eadie regarding ESHA analysis and buffer recommendations, Terrace Point and Younger Lagoon Reserve, University of California, Santa Cruz, the grassland-scrub matrix surrounding Terrace Point wetlands to which the commenter refers (characterized as coyote brush scrub-grassland in the HBG letter report) does not meet the definition of ESHA because it (1) does not support species or habitats that are rare or especially valuable because of their special nature or role in the local ecosystem; (2) is not easily disturbed or degraded by human activities and developments (indeed, many are the products of past anthropogenic disturbance); (3) is not occupied by rare, threatened, and endangered (RTE) species; (4) is not protected habitat; and (5) is not especially valuable in its own right. If the commenter's ESHA criterion were used (i.e., large rodent population that provides potential food source for sensitive raptor species), large tracts of land within California's coastal zone would warrant ESHA designation. HBG does not believe the CCC intends ESHA designation to be used in this manner. See also the response to comment SA-3-17.

PH-4-2: The "wet," "very wet," and "saturated" soil categories are mutually exclusive. Neither soils characterized as "wet" during study phase II nor soil characterized as "very wet" during study phase III were considered "saturated" to the point that hydric soil conditions were present. Accordingly, none of the soil samples determined to be "wet" in phases I and II would have been considered "saturated." HBG's January 2004 report follows CCC and ACOE wetland delineation methodologies, neither of which requires the use of statistical analysis. For this reason, statistical analyses were not used to compare the quantitative and qualitative soils data nor establish confidence intervals for the soil moisture characterization.

PH-4-3: See the response to comment ORG-2-21.

PH-4-4: The 1987 ACOE wetland delineation manual defines the growing season as follows: "The portion of the year when soil temperatures at 19.7 inches below the soil surface are higher than biologic zero (5° C). For ease of determination this period can be approximated by the number of frost-free days." HBG's treatment of the growing season as year-round is consistent with this definition. Based on conversations with ACOE and CCC staff, other wetland delineators follow this convention (i.e., it is standard protocol) and it is accepted by local regulatory agencies.

PH-4-5: The areas to which the commenter is referring are unclear. In accordance with ACOE and CCC wetland delineation guidelines, HBG's January 2004 report focused on existing (not historic) conditions on Terrace Point. All areas supporting wetland hydrology, hydric soils, or hydrophytic vegetation conditions were given consideration as potential wetlands.

PH-4-6: See the response to comment PH-3-2.

PH-4-7: The wetlands on the project site were delineated based on conditions that existed when the field surveys were conducted. Although the effect of utility line construction on wetlands was not specifically investigated in connection with the delineation effort, none of the data collected in conjunction with HBG's January 2004 report suggest this impact has occurred.

PH-4-8: The commenters have never submitted the survey report of experts, herbaria records, and other accounts supporting *Baccharis douglasii*'s designation as an obligate (OBL) wetland species to the University. While the designation of *Baccharis douglasii* by the NWI as an OBL wetland species is not being questioned, HBG has found that *Baccharis douglasii* is not acting as a hydrophyte on many portions of Terrace Point due to clear evidence of upland hydrological conditions in such areas. It is possible that some of the upland species onsite are incorrectly classified in the NWI list, but HBG does not have any data to indicate which and how many. Potential incorrect classifications of species as upland, however, would have no bearing on the wetland delineation due to the special attention given to hydrology conditions onsite.

PH-4-9: The commenter requests information on wetland enhancement and associated permitting. Implementation Measure 3.2.1 (Restoration of Wetlands on the Marine Science Campus) states that the restoration program will include integrating the hydrology of wetlands W1 and W2 and expanding this consolidated area to provide biological values that are not and cannot be provided by the small non-ESHA wetland depression (W7) in the northeast corner of the site. The program will also enhance plant biology in wetlands W1, W2, and W6 to create a consolidated corridor for wildlife movement to YLR. The University will prepare a restoration plan for this purpose. The plan will be submitted to the California Department of Fish and Game and USFWS for review and comment.

The CLRDP provides for buffering of all wetlands on site. CLRDP provisions for maintenance of wetlands, including the restored and enhanced areas, are also found in CLRDP Capital Improvement Measure 9.2.3, at CLRDP page IX-5, and page B-55 of the CLRDP's Resource Management Plan. Wetland maintenance activities may be subject to the U.S. Army Corps of Engineers' (ACOE) nationwide permit (NWP#3) for maintenance activities in wetlands subject to ACOE jurisdiction. Wetland maintenance activities will be subject to the development review procedures, including potential review by the Coastal Commission, described in Chapter VIII of the CLRDP. These procedures will not apply to maintenance activities that do not involve the presence of mechanized equipment or placement of solid material. CLRDP VIII-3.

PH-4-10: Documented natural filtration BMP applications are not as numerous in California as they are in the Pacific Northwest, specifically the Puget Sound area, and as a result, the majority of natural filtration system performance studies are based on systems in the State of Washington,

which must process much larger volumes of water. Studies of natural filtration system (buffer filter strips and grass-lined swales) performance indicate that they are functionally equivalent to oil-water separators, and remove 83 percent of total suspended solids, 67 percent of insoluble metals, and 75 percent of oil and grease in runoff. These studies also indicate that adequate residence time of the storm water in these systems is necessary to obtain acceptable contaminant removal rates. This information was obtained from The California Storm Water Best Management Practice Handbook (Industrial/Commercial), Storm Water Quality Task Force, March 1993 and Biofiltration Systems for Storm Runoff Water Quality Control, Course Manual completed by Richard Horner in 1993. The Stormwater Concept Plan associated with the CLRDP reports performance criteria obtained from the National Pollutant Removal Performance Database (page 39). These data are summarized below:

The following data are the median pollutant removal efficiencies found in 139 monitoring studies of treatment BMPs:

	<u>Sediments</u>	<u>Hydrocarbons (TPH)</u>	<u>Zinc</u>	<u>Copper</u>
Wet Pond	80%	81%	66%	57%
Vegetated swales	81%	62%	71%	51%

The Stormwater Concept Plan (page 36) presents a maintenance schedule for the stormwater ponds, vegetated swales and vegetated filter strips. The stormwater pond maintenance program would require monthly trash removal, shrub removal, and grass mowing, removal of sediments from the forebay every 5 years, and removal of sediments from pool every 25+ years. Vegetated swales would require monthly grass mowing and semi-annual trash removal. Vegetated swales would require semi annual trash removal. “Biomass” or trash would be disposed of appropriately or reused if practical.

PH-4-11: The methodology employed in HBG’s January 2004 report is consistent with ACOE and CCC wetland delineation guidelines. It does not set new precedent. Hence, no additional loss of similar habitat is anticipated other than that which is expected to occur under existing regulatory policies and procedures.

PH-4-12: The Draft EIR concludes that the proposed project would not be growth-inducing in that, even assuming all enrollment and employment increases associated with the project represented in-migration of students and workers, the numbers are not large in the context of either the Santa Cruz urban area or the UCSC campus. No mitigation measures are necessary or proposed.

PH-4-13: The CLRDP does designate a “Utility Prohibition Zone” along the western boundary of the project site (see CLRDP Figure 5.6). The purpose of this utility designation would be to create an area through which the extension of sewer and water utilities to areas outside the City of Santa Cruz is precluded. The utility prohibition zone would thereby prohibit the westward extension of utility lines. The proposed project would provide infrastructure to serve only the needs of the projected campus population. Circulation improvements would be limited and parking would be regulated though use of parking permits and time-limited parking. See also the

response to comment PH-6-2. These provisions would have the same effect as a one-foot-wide conservation easement along the western edge of the property, suggested by the commenter.

PH-4-14: The hydrologic study to develop the Stormwater Concept Plan did not rely on predictive surface water modeling; rather, hydrologists used standard, proven mathematical methods to calculate flow rates and volumes. The assumptions used in these methods are based on historic data and practice and, for that reason, reflect typical conditions. As described in the Stormwater Concept Plan (pages 15 and 16, CLRDP Appendix D), analysis necessary to formulate the stormwater management strategy for the CLRDP included the use of direct mathematical calculations. Peak flow rates and volumes for existing conditions in each basin were calculated for the 2-, 5-, 10-, and 25-year return storm event. These return storm events are based on historical rainfall data and are not predicted. Hydrologists used the Rational Method to calculate peak and total runoff. This method is used in hydrologic studies because it is a straightforward technique and is suitable for the size of the Marine Science Campus. The Rational Method requires four parameters to determine runoff rates: area, time of concentration, rainfall, and a runoff coefficient. Data for the Rational Method included CAD drawings to determine basin area, rainfall intensity curves developed by the County of Santa Cruz to determine rainfall, and U.S. Natural Resource Conservation Service TR20 Lag Method calculations to determine time of concentration. Commonly accepted, standard values for specified surface conditions were used to determine runoff coefficients. These values are based on observed conditions and historic data. The hydrologic values used in the post-development flow rate calculations incorporate the expected vegetation type and condition. The assumptions on post-project runoff would not need to change under future project operations.

PH-4-15: As discussed in the response to comment PH-4-15, hydrologic calculations are based on mathematical formulas and are computed using the Rational Method, a standard, proven surface water flow calculation tool. Unlike some predictive models, Rational Method calculations are based on known parameters developed through observation and historical data. Therefore, the need for statistical analyses to determine level of confidence is not appropriate or necessary.

With respect to wetlands, HBG's January 2004 report follows ACOE and CCC wetland delineation methodologies, neither of which requires the use of statistical analysis. HBG did a statistical analysis of rainfall data to determine what normal rainfall conditions would be, following ACOE definition.

PH-4-16: See the response to comment ORG-2-10.

PH-4-17: See the response to comment ORG-2-12.

PH-4-18: See the response to comment ORG-3-6.

COMMENTER PH-5: KIM HAYES

PH-5-1: The existing Long Marine Laboratory (LML) facilities on the project site contain a total of 108,604 square feet of building space (see Table 3-1 on page 3-5 of the Draft EIR). The CLRDP building program would allow a total of 377,856 square feet of net new building space (see Table 3-2 on page 3-15 of the Draft EIR). The 377,856-square-foot total is more than 2.5 times the existing amount of building space on the site. The Draft EIR does not rely on the “2.5 times the amount of existing development” estimate for any aspect of the environmental review.

PH-5-2: The coastal scrub-grassland on the site has elements of Holland’s “coastal terrace prairie” (CTP), but the grasslands on the site as a whole are not CTP. Coastal terrace prairie is characterized as including native grasses such as *Danthonia californica*, *Nassella pulchra*, and *Festuca rubra* and a high diversity of forbs. The coastal scrub-grassland as described in the Draft EIR is not a sensitive habitat, and no special-status plants are present.

Terrace Point could be restored to CTP, and in fact all three species listed above are considered for restoration under the Resource Management Plan (RMP). The University’s expectation is that the site will be more like coastal terrace prairie with the implementation of the CLDRP than without it. However, the analysis in the Draft EIR follows CEQA *Guidelines* Section 15125, which states that the description of the environment is “as it exists before the commencement of the project,” not in a hypothetical future state possible only if the area is restored.

PH-5-3: The comment correctly summarizes the Draft EIR’s assessment of raptors, and states that the site has “very high value” for these species. The Draft EIR takes significant care to acknowledge the presence of, and mitigate the impacts on, raptors that nest on the ground or in low shrubs, and to analyze loss of foraging habitat. However, the lack of structural diversity in vegetation on the terrace, added to its previous agricultural regime, has reduced its value. EcoSystems West biologists observed only the following raptor species foraging in the upland terrace: white-tailed kite, a pair of American kestrels, barn owl, and a pair of northern harriers. See also the response to comment ORG-2-19.

PH-5-4: In determining whether a project would have significant effects, such as effects on wildlife, the Lead Agency must consider the whole of an action, not simply its constituent parts (CEQA *Guidelines* Sections 15378, 15064 [a][1]). Within the Draft EIR discussion of impacts on wildlife, the impacts listed and the mitigations proposed are those which remain after the totality of the project was considered, including all aspects of the CLRDP and RMP. The CLRDP contains actions and policies that avoid impacts on, and in some cases improve, natural resources. These are discussed in the section titled “Measures Proposed as Part of the Project” that begins on Draft EIR page 4.4-57. Numerous biological resource protection policies are proposed for the terrace area and YLR. As part of the project, the resource management goals are identified in the RMP.

There are unquestionably natural resource impacts associated with development of any kind, and the University appreciates the opinion of the California Native Plant Society (CNPS) and other groups as to the need to protect even degraded landscapes when they support plants and animals. However, the Terrace Point site is not the same as areas with high diversity, intact coastal terrace prairie (see discussion by Stromberg, Kephart, Yadon, Composition, invasibility, and diversity in coastal California grasslands, Madroño, 2002) and areas along the coast with high raptor diversity (see the response to comment ORG-2-19). By some standards, any change is significant, but CEQA carefully sets out consistent standards by which to make these assessments under the law, and these were followed in the Draft EIR.

PH-5-5: Hydrology of the terrace is discussed in Draft EIR Section 4.8 (Hydrology and Water Quality); jurisdictional wetlands on pages 4.4-46 through 4.4-49 and 4.9-21 through 4.9-23; and ESHAs on pages 4.4-50 through 4.4-54 and 4.9-21 through 4.9-23. Wildlife habitat loss is disclosed at several points, including pages 4.4-55, 4.4-65, 4.4-67, 4.4-69, and 4.9-24 through 4.9-25.

PH-5-6: The CLRDP contains several implementation measures to improve, maintain, and enhance Younger Lagoon Reserve (refer to the Draft EIR page 4.8-22 for a description of applicable implementation measures). These are discussed in several places throughout Section 4.9, Hydrology and Water Quality, of the Draft EIR. For instance, the Stormwater Concept Plan, which is an integral part of the CLRDP, is described on page 4.8-18 of the Draft EIR and includes the five main objectives (see the response to comment I-4-52). The objectives include water quality improvement, storm flow control, erosion and sedimentation controls and improvements for YLR. The “Project Impacts and Mitigation Measures” section beginning on page 4.8-24 of the Draft EIR addresses water quality, storm flow, erosion, and sedimentation impacts related to the proposed project.

The commenter’s analogy of the site to a wet sponge does not accurately describe the conditions at the site. The proposed development would not cause the water in the wetlands at the site to “squeeze out.” Rather, the development could increase runoff, increase stormwater pollutants, and reduce groundwater recharge due to the addition of impervious surfaces proposed as part of the CLRDP. However, loss of water is not anticipated because adequate protective measures have been provided through the CLRDP to isolate the wetlands from development encroachment. The changes to the Marine Science Campus under the CLRDP would not have a significant impact on the wetlands, YLR, or groundwater because the project incorporates several implementation measures to ensure that these ESHAs are protected and are, in most cases, improved. Also see the responses to comments ORG-2-9, I-4-52, and I-5-6.

PH-5-7: See also the responses to comments ORG-2-9, I-4-52, and I-5-6. Actions tied to the CLRDP and those not tied to a specific development include improvements to the erosion-prone drainage areas that empty into YLR, cleaning or replacement of the 18-inch “reinforced concrete pipe connecting Basin 6 and 8 and YLR, reconstruction of the stormwater outfall in the lower portion of Basin 8, and construction of a new discharge facility to replace the percolation trench. Additional descriptions of these measures for the entire development program and the near-term projects are discussed in the Draft EIR, pages 4.8-29 through 4.8-32.

PH-5-8: As indicated by the commenter, the Draft EIR identifies the No Project Alternative as the environmentally superior alternative. As indicated on Draft EIR page 5-31, if 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. As indicated by both the commenter and the Draft EIR, other than the No Project Alternative, the Reduced Program Alternative would be the environmentally superior alternative.

PH-5-9: The University's intention in developing the CLRDP has been to develop an environmentally sensitive plan that is consistent with project objectives.

PH-5-10: Wetland delineations must be done in accordance with the criteria of the agencies with jurisdiction over the resources in question, which, in this case, are the ACOE and CCC. In accordance with ACOE and CCC wetland delineation guidelines, HBG's January 2004 report focused on existing conditions on Terrace Point. Other wetland delineations prepared for the site were not based on current site conditions or otherwise are not in accordance with agency guidelines. The 1993 delineation was never verified by ACOE. The 1997 delineation was verified by ACOE, but the verification (only valid for five years) has expired. The informal delineation prepared by a consortium of environmental groups (e.g., Sierra Club, Terrace Point Action Network) was not done in accordance with agency criteria. For these reasons, the University must rely on HBG's January 2004 report, and is not in a position to choose any of the other delineations.

COMMENTER PH-6: ALDO GIACCHINO

PH-6-1: The commenter's opinion that the intensity of the proposed project is too great for the site is acknowledged. The visual and land use effects of the proposed project are examined in Sections 4.1, Aesthetics, and 4.9, Land Use and Planning, and are found to be less than significant.

PH-6-2: The commenter expresses a concern that development of the proposed project will generate development pressure on agricultural lands to the west of the project site.

Lands to the west of the project site are in Santa Cruz County. As indicated in the Draft EIR on page 4.9-3, the Santa Cruz County General Plan/LCP applies to county lands immediately adjacent the site to the west. The County General Plan/LCP establishes comprehensive, long-term land use policy for the County. The General Plan/LCP designates the lands immediately adjacent to the west of the site as "Commercial Agricultural Land." The intent of the Commercial Agricultural Land designation is "to maintain for exclusive agricultural use those lands identified on the County Agricultural Resources Map as best suited to the commercial production of food, fiber, and ornamental crops and livestock and to prevent conversion of commercial agricultural land to non-agricultural uses." In addition, the designation recognizes "that agriculture is a priority land use" and that resolution of "policy conflicts in favor of preserving and promoting agriculture on designated commercial agricultural lands" is preferred. County policy therefore precludes non-agricultural development to the west of the project site.

In addition, as indicated on Draft EIR page 6-1, the proposed project includes several elements designed to serve as a transition between urban and rural development and to provide a terminus to westward urban development at the City of Santa Cruz city limit. The land use plan clusters complementary uses, retaining undeveloped open lands, habitat areas, and buffers adjacent to neighboring agricultural uses. The proposed project would provide infrastructure to serve only the needs of the projected campus population. A utility prohibition zone would prohibit the westward extension of utility lines. Policies in the land use element limit the size of utility lines onsite to serve only the projected needs of the campus and establish a utility prohibition zone where new sewer or water utility lines would not be allowed. Circulation improvements would be limited and parking would be regulated through use of parking permits and time-limited parking. See also the responses to comments SA-3-91 and I-4-11.

Applicable county land use policies, together with the policies and implementation measures of the proposed CLRDP, appear to be sufficient to prevent, appreciable increases in material pressures for non-agricultural development in lands to the west of the project site for the reasonably foreseeable future.

PH-6-3: See the response to comment LA-2-1.

PH-6-4: As stated in the Draft EIR (page 4.9-7), “due to the sensitive status of the wetland and upland areas within YLR, public access is controlled; however, three existing lookout points are designated near the lagoon for public viewing.”

Additionally, as stated on Draft EIR page 4.9-17, “The Coastal Commission approved an *Interim Access Plan for the Marine Science Campus* and a *Younger Lagoon Beach/Wetland Area Management and Access Plan* in 2000 and 2001, respectively.... These plans reaffirmed access controls to YLR, designated public access trails through the terrace portion of the site and to overlook areas, and confirmed the significance of the docent-led tours by the Seymour Marine Discovery Center as important public access elements. As articulated in these access plans, the majority of the site is open to free public access during daylight hours on dedicated trails, including some 800 feet of bluff-top trail at the southern edge of the site. While access to research laboratory areas and the Younger Lagoon Reserve area is controlled, access and interpretation of these areas is provided through docent-guided tour programs of the Seymour Center.²⁸”

COMMENTER PH-7: RON SWENSON

PH-7-1: Please see the responses to comments I-8-5 and I-9-1.

PH-7-2: The larger setback between the De Anza Santa Cruz residential community and the CLRDP development on the middle terrace is due to the need to protect a view corridor in that area. Such a constraint is not present along Shaffer Road north of Delaware Avenue. Therefore development on the upper terrace is planned to extend up to Shaffer Road. See also the responses to comments I-8-4 and SA-3-86.

²⁸ UC Santa Cruz Marine Science Campus Draft Coastal Long Range Development Plan, January 2004, page II-18.

PH-7-3: Please see the response to comment I-8-2.

COMMENTS PH-8: DON CROLL

PH-8-1: Comment noted.

PH-8-2: Please refer to the responses to comments ORG-2-9, I-4-52, I-5-6, PH-5-6, and PH-5-7.

PH-8-3: The CLRDP best addresses this comment on page IV-28: “In general, the ornamental landscape of the Marine Science Campus consists of those unbuilt areas within building complexes that are planted and maintained for passive and active recreational or strictly ornamental purposes. These areas are found only within the building envelopes of the three development zones...These areas may contain a more garden-like landscape of ornamental trees, shrubs and groundcovers that will vary depending upon the projected use of the area. In most cases ornamental plants native to the Central California coast will be used. Weedy species with the potential to become invasive will be avoided.”

The design guidelines for the project (page VI-9 of the CLRDP) are even stronger: “Use plant material for both natural and ornamental areas that will be native to the Northern and Central California coast” and “plant native materials that are from the same gene pool.”

PH-8-4: Please refer to the responses to comments ORG-2-6 and ORG-2-9.

CHAPTER 5

MITIGATION MONITORING PROGRAM

CEQA requires that a Lead Agency establish a program to monitor and report on measures adopted as part of the environmental review process to mitigate or avoid significant effects on the environment. This Mitigation Monitoring Program (MMP) is designed to ensure implementation of the mitigation measures identified in the UC Santa Cruz Marine Science Campus CLRDP EIR and measures included in the CLRDP to avoid or minimize environmental effects of the development envisioned in the CLRDP.

The CLRDP MMP, as outlined in Table 5-1, describes monitoring and reporting procedures, monitoring responsibilities, and monitoring schedules for mitigation measures identified in the EIR analysis of the environmental effects of the CLRDP as a whole, as well as the measures included in the CLRDP to avoid or minimize environmental effects. Table 5-1 is divided into two sections: Part A describes procedures for the EIR mitigation measures; Part B covers the CLRDP measures.

Table 5-2 presents the MMP for the Shared Campus Warehouse and Laydown Facility and lists the project-level mitigation measures identified in the EIR for this project along with the monitoring and reporting procedures, monitoring responsibilities, and monitoring schedules. Table 5-3 presents the MMP for the USGS Western Coastal and Marine Geology Facility. The 42 Apartment/Townhouse Units, the SORACC, and the Center for Ocean Health Phase II projects do not require project-level mitigation measures therefore no MMPs for these projects are included. Note that many of the measures listed in Table 5-1 are applicable to all of the five near-term projects. These measures are not listed in the project-level MMPs but will be implemented and monitored during development of these projects.

A variety of campus entities have been assigned monitoring responsibilities under this MMP. All monitoring actions, once completed, would be reported (in writing) to UC Santa Cruz Physical Planning and Construction, which would maintain mitigation monitoring records for the proposed project. The MMP will be considered by The Regents in conjunction with project review and will be included as a condition of project approval.

The components of this table are addressed briefly below:

Mitigation Measures: The mitigation measures in the MMPs are taken verbatim from the Final EIR, and the numbers assigned the mitigation measures are the same as those presented in the Final EIR.

CLRDP Measures: Individual CLRDP policies and implementation measures in the MMP are taken verbatim from the CLRDP, and the numbers assigned the mitigation measures are the same as those presented in the CLRDP. Other CLRDP measures in the MMP, such as the Stormwater Concept Plan, Resource Management Plan, and the Design Guidelines, are summarized.

General versus Project-Specific Measures: Specifies whether the mitigation measure or CLRDP element applies to the development of the Marine Science Campus under the CLRDP as a whole, or to the development of individual projects.

Mitigation Timing: Identifies the timing for implementation of each action. Each entry in the table begins with a two-letter code. These codes indicate when the mitigation measure must be implemented in the typical project cycle in order to effectively accomplish the intended outcome. The meaning of these codes is as follow:

SS – During site selection

DE – During detailed project planning or project design prior to project approval

CO – Prior to or during construction

OC – Prior to occupancy

OP – During operation

OT – Other

Monitoring and Reporting Responsibility: Identifies the UCSC office responsible for undertaking the required action and monitoring the measure.

**TABLE 5-1
COASTAL LONG RANGE DEVELOPMENT PLAN
MITIGATION MONITORING PROGRAM
PART A: EIR MITIGATIONS**

Mitigation Measure	Applicability ¹	Description of Mitigation Measure	Monitoring and Reporting Procedure	Mitigation Timing ²	Monitoring and Reporting Responsibility
<i>Agricultural Resources</i>					
4.2-1	G	<ul style="list-style-type: none"> UCSC will install a four-foot-high landscaped fence along the Younger Ranch property line that will extend from the bend in the existing access road, northward along the property line. The fence will be sited and constructed to have a uniform gap of 16 inches between a smooth wire defining the bottom of the fence and the ground. This will assure that wildlife passage can continue to occur through the fence. UCSC will install tree and shrub landscaping approximately 25 feet inside the fence (to minimize shading effects on Younger Ranch crops), consisting of an indigenous, drought-resistant mosaic of mid-level shrubs and taller trees to help dissipate dust generation from the west. Tree and shrub choices will be made in conjunction with the landscape architect experienced in the use of native plants and vegetation. Trees and shrubs will be selected for non-invasive character. Native blackberries are recommended, as they would serve as an access barrier. UCSC will install the fence and landscaping prior to groundbreaking of any CLRDP project components. 	<p>Install fence and landscaping.</p> <p>Document that fence and landscaping have been installed consistent with requirements in the mitigation measure.</p>	<p>CO</p> <p>Prior to ground-breaking of any CLRDP project components</p> <p>CO</p> <p>Prior to construction</p>	<p>Physical Planning and Construction</p> <p>Physical Planning and Construction</p>

¹ G = general campus measure; not tied to individual projects; PS = project-specific

² Project stage at which implementation of the measure is required: PP = project planning; SS = during site selection; DE = during detailed project planning or project design prior to project approval; CO = prior to or during construction; OC = prior to occupancy; OP = during operation; OT = other

Mitigation Measure	Applicability ¹	Description of Mitigation Measure	Monitoring and Reporting Procedure		Mitigation Timing ²	Monitoring and Reporting Responsibility
<i>Air Quality</i>						
4.3-1	PS	<p>The University shall require construction contractors to implement a dust abatement program to reduce the contribution of project construction to local respirable particulate matter concentrations. Elements of this program shall include the following as appropriate for each project:</p> <ul style="list-style-type: none"> • Water all active construction areas at least twice daily. Frequency shall be based on the type of operation, soil, and wind exposure. • Cover all trucks hauling soil, sand, and other loose materials, or require all trucks to maintain at least two feet of freeboard (i.e., the minimum required space between the top of the load and the top of the trailer). • Pave, apply water two times daily, or apply non-toxic soil stabilizers to all unpaved access roads, parking areas, and construction staging areas. • Sweep daily with water sweepers any paved access roads, parking areas, and staging areas at construction sites. • Sweep streets daily with water sweepers if visible soil material is carried onto adjacent public streets. • Hydroseed or apply (non-toxic) soil stabilizers to inactive construction areas or previously graded areas left inactive for ten days or more. • Enclose, cover, water twice daily or apply (non-toxic) soil stabilizers to exposed stockpiles (dirt, sand, etc.). • Limit traffic speeds on unpaved roads to 15 miles per hour. 	<p>Include standard dust control measures as part of every construction project contract.</p> <p>Inspect construction site at regular intervals during construction to verify compliance with specified dust control measures.</p>	DE CO	<p>Prior to construction</p> <p>Weekly during construction</p>	<p>Physical Planning and Construction</p> <p>Physical Planning and Construction</p>

Mitigation Measure	Applicability ¹	Description of Mitigation Measure	Monitoring and Reporting Procedure	Mitigation Timing ²		Monitoring and Reporting Responsibility
		<ul style="list-style-type: none"> • Install sandbags or other erosion control measures to prevent silt runoff to public roadways. • Replant vegetation in disturbed areas as quickly as possible. • In the event that grading and excavation at two or more large project sites is proposed to occur concurrently (large sites defined as involving more than 2 acres), install wheel washers at the entrance of the construction sites. • Phase construction projects in such a manner that minimizes the area of surface disturbance (e.g., grading, excavation) and the number of vehicle trips on unpaved surfaces. 				
Biological Resources						
4.4-1	PS	<p>For all projects proposed in the upper terrace under the CLRDP, the University will implement the following:</p> <ul style="list-style-type: none"> • A preconstruction survey for CRLF will be conducted of all areas proposed for grading and construction by a qualified biologist, approved by the USFWS. If CRLF are observed, grading activities shall be postponed and USFWS shall be consulted to determine appropriate actions to avoid impact. Consultation with the USFWS will result in either a determination of the need to obtain a permit or in the identification of measures to avoid take of the individual(s). <p>The biological monitor shall also conduct meetings with the contractor(s) and other key construction personnel to describe the importance of the species, the need to restrict work to designated areas, and to discuss procedures for avoiding harm or harassment of wildlife encountered during construction.</p>	<p>Conduct survey. Document results.</p> <p>If CRLF are observed, consult with USFWS.</p> <p>Conduct meetings with contractor(s) and construction personnel. Include mitigation specifications in construction contract.</p>	CO	<p>Prior to construction, of projects in upper terrace</p> <p>Prior to construction, if CRLF are observed</p> <p>Before beginning construction</p>	<p>Physical Planning and Construction</p> <p>Physical Planning and Construction</p> <p>Physical Planning and Construction</p>

Mitigation Measure	Applicability ¹	Description of Mitigation Measure	Monitoring and Reporting Procedure	Mitigation Timing ²		Monitoring and Reporting Responsibility
4.4-2 ³	PS	<p>UCSC shall ensure that construction activities avoid disturbing nests of raptors (and other special-status birds). If ground-disturbing activities are scheduled to occur during the breeding season (February 1 through August 31), the following measures are required to avoid potential adverse effects on nesting special-status raptors and other birds:</p> <ul style="list-style-type: none"> • A qualified wildlife biologist will conduct preconstruction surveys of all potential nesting habitat. For burrowing owls, such surveys will follow the most recent CDFG <i>Burrowing Owl Survey Protocol and Mitigation Guidelines</i>. • If active raptor nests are found during preconstruction surveys, a no-disturbance buffer acceptable in size to CDFG will be created around active raptor nests and nests of any other special-status birds during the breeding season, and maintained until it is determined that all young have fledged. Raptor or other bird nests initiated during construction are presumed to be unaffected, and no buffer is necessary. However, the “take” of any individuals will be prohibited. • If preconstruction surveys indicate that nests are inactive or potential habitat is unoccupied during the construction/restoration period, no further mitigation is required. Trees and shrubs that have been determined to be unoccupied by special-status birds or that are located outside the no-disturbance buffer for active nests may be removed. 	<p>Conduct survey. Document results.</p> <p>Create no-disturbance buffer in consultation with qualified biologist. Include mitigation specifications in construction contract.</p>	CO	<p>Before beginning construction on each project</p> <p>Before beginning construction, if active raptor nests are found</p>	<p>Physical Planning and Construction</p> <p>Physical Planning and Construction</p>

³ Applicable in upper, middle and lower terrace areas.

Mitigation Measure	Applicability ¹	Description of Mitigation Measure	Monitoring and Reporting Procedure	Mitigation Timing ²		Monitoring and Reporting Responsibility
4.4-3 ⁴	PS	<p>UCSC will ensure that construction/operation activities avoid disturbing nests of black swift. If construction activities are scheduled to occur during the breeding season (June 1 through September 30), the following measures will be implemented to avoid potential adverse effects:</p> <ul style="list-style-type: none"> UCSC will conduct pre-construction surveys to determine presence of active black swift nests within the project area. Published literature suggests that the optimal survey time is the final two hours of daylight, when chick provisioning rates may increase and adults are returning to the colony to roost. Targeting surveys for the last hours of daylight should also maximize the probability of counting breeding as opposed to nonresident foraging individuals. If active nests are found during preconstruction surveys, UCSC will delay construction until after fledging occurs. If preconstruction surveys indicate that nests are inactive or potential habitat is unoccupied, no further mitigation is required. 	<p>Conduct survey. Document results.</p> <p>Delay construction until after fledging occurs.</p>	CO	Before beginning construction of seawater system facilities, if construction scheduled during breeding season	Physical Planning and Construction
Cultural Resources						
4.5-1	PS	<p>If human remains are discovered during the construction of a development project under the CLRDP, the University and/or its employees shall notify the Santa Cruz County Coroner's Office immediately. Upon determination by the County Coroner that the remains are Native American, the Coroner shall contact the California Native American Heritage Commission, pursuant to subdivision (c) of Section 7050.5 of the Health and Safety Code, and the County Coordinator of Indian Affairs and appropriate Native American consultation shall be conducted, as outlined by PRC 5097.98. Implementation</p>	<p>Include in construction contract the requirement that the University be notified if suspected human bone is discovered.</p> <p>Contact archaeologist and County Coroner in the event of discovery of suspected human bone. Contact California Native American Heritage Commission and</p>	CO	Before beginning construction	Physical Planning and Construction
				CO	During construction	Physical Planning and Construction

⁴ Applicable only in lower terrace area.

Mitigation Measure	Applicability ¹	Description of Mitigation Measure	Monitoring and Reporting Procedure	Mitigation Timing ²		Monitoring and Reporting Responsibility
		Measure 3.9.1, Construction Monitoring, as identified in the CLRDP, shall also apply. UCSC will be responsible for implementing this mitigation measure.	conduct Native American consultation if Coroner determines the remains are Native American.			
Hazards and Hazardous Materials						
4.7-1	PS	<p>For projects proposed by non-UC entities on campus that involve laboratories, non-UC 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.</p> <ul style="list-style-type: none"> • Non-UC entities shall provide to campus EH&S copies of all required environmental reports to local, state, and federal environmental and safety regulators. • Non-UC entities shall submit the qualifications of designated laboratory directors to UC Santa Cruz EH&S Office prior to commencing laboratory operations. Such documentation shall be in the form of educational and professional qualifications/ experience. • Non-UC entities shall submit a copy of applicable regulatory environmental documents prior to commencing on-site research. Applicable documents may include a Hazardous Materials Business Plan, an EPA Hazardous Waste Generator ID Number, a Wastewater Discharge Permit, and air permits regulating fume hood exhaust or emissions from other equipment. Copies of revisions or updates to regulatory documents shall be submitted to EH&S in a timely manner. • Non-UC entities shall submit certification of compliance with NIH biosafety principles to the UC Santa Cruz EH&S Office prior to commencing on-site research or pilot plant manufacturing activities. Non-UC entities shall submit copies of 	<p>Include stipulated requirements in contract or agreement.</p> <p>Require and verify receipt of required documentation.</p> <p>Request revised or updated documents.</p>	DE	Prior to project approval	Business and Administrative Services, and Environmental Health and Safety
				OP	Annually, during occupancy	Environmental Health and Safety

Mitigation Measure	Applicability ¹	Description of Mitigation Measure	Monitoring and Reporting Procedure	Mitigation Timing ²		Monitoring and Reporting Responsibility
		completed medical waste management plans, biosafety management plans, inventories of infectious or genetically modified agents, applicable permits and updates.				
Noise						
4.11-1	PS	Prior to developing marine research and education facilities on the middle terrace east of McAllister Way, or additional support housing on the upper terrace, the University shall conduct a project-specific noise analysis. Project-level mitigation measures shall be incorporated into the design of these facilities to reduce potentially significant noise impacts, if necessary.	Conduct noise analysis. Incorporate project-level mitigation measures into project design.	SS DE	During site selection During project design	Physical Planning and Construction Physical Planning and Construction
4.11-4	G/PS	Prior to the initiation of construction, the University shall approve a construction noise mitigation program including but not limited to the following: <ul style="list-style-type: none"> The University shall require that construction activities be limited to a schedule that minimizes disruption to noise-sensitive uses on the project site and in the vicinity through implementation of the following: <ul style="list-style-type: none"> Construction activities during daytime and evening hours (7:00 AM to 10:00 PM) shall not occur within 150 feet of sensitive receptors, when feasible. Construction activities within 500 feet of sensitive receptors activities shall not occur during nighttime hours (10:00 PM to 7:00 AM). Whenever possible, academic and administrative staff, as well as residents who will be subject to construction noise, shall be informed one week before the start of each construction project. Loud construction activity as described above within 150 feet of an academic or residential use shall, to the extent feasible, be scheduled during holidays, spring break, or summer break. 	Develop construction noise mitigation program and adopt as part of standard construction contract specifications Inspect construction site to verify that measures are being implemented.	DE, CO CO	Prior to initiation of construction under the CLRDP During construction	Physical Planning and Construction Physical Planning and Construction

Mitigation Measure	Applicability ¹	Description of Mitigation Measure	Monitoring and Reporting Procedure	Mitigation Timing ²		Monitoring and Reporting Responsibility
		<ul style="list-style-type: none"> <li>– To reduce noise impacts from construction, the University shall require that construction contractors muffle or otherwise control noise from construction equipment through implementation of the measures below. The effectiveness of these measures is quantified in Table 4.11-4 above. <li>– Internal combustion engines used for any purpose at the construction sites shall be equipped with a muffler of a type recommended by the manufacturer. <li>– Equipment used for construction shall utilize the best available noise control techniques (e.g., improved mufflers, equipment redesign, use of intake silencers, ducts, engine enclosures, and acoustically-attenuating shields or shrouds, wherever feasible); <li>– Impact tools (e.g., jack hammers, pavement breakers, and rock drills) used for construction shall be hydraulically or electrically powered wherever feasible to avoid noise associated with compressed air exhaust from pneumatically powered tools. However, where use of pneumatic tools is unavoidable, an exhaust muffler on the compressed air exhaust shall be used. Such mufflers can lower noise levels from the exhaust as much as 10 dBA. External jackets on the tools themselves shall be used where feasible, and this could achieve a reduction of 5 dBA. Quieter procedures such as using drilling equipment rather than impact equipment shall be implemented whenever feasible. <li>– Stationary noise sources shall be located as far from sensitive receptors as feasible. If they must be located near sensitive receptors, they shall be muffled to the extent feasible and/or, where practicable, enclosed within temporary sheds. 				

Mitigation Measure	Applicability ¹	Description of Mitigation Measure	Monitoring and Reporting Procedure	Mitigation Timing ²		Monitoring and Reporting Responsibility
		<ul style="list-style-type: none"> • To reduce noise impacts from construction, the University shall require that construction contractors muffle or otherwise control noise from construction equipment through implementation of the measures below. The effectiveness of these measures is quantified in Table 4.11-4 above. <ul style="list-style-type: none"> – Internal combustion engines used for any purpose at the construction sites shall be equipped with a muffler of a type recommended by the manufacturer. – Equipment used for construction shall utilize the best available noise control techniques (e.g., improved mufflers, equipment redesign, use of intake silencers, ducts, engine enclosures, and acoustically-attenuating shields or shrouds, wherever feasible); – Impact tools (e.g., jack hammers, pavement breakers, and rock drills) used for construction shall be hydraulically or electrically powered wherever feasible to avoid noise associated with compressed air exhaust from pneumatically powered tools. However, where use of pneumatic tools is unavoidable, an exhaust muffler on the compressed air exhaust shall be used. Such mufflers can lower noise levels from the exhaust as much as 10 dBA. External jackets on the tools themselves shall be used where feasible, and this could achieve a reduction of 5 dBA. Quieter procedures such as using drilling equipment rather than impact equipment shall be implemented whenever feasible. – Stationary noise sources shall be located as far from sensitive receptors as feasible. If they must be located near sensitive receptors, they shall be muffled to the extent feasible and/or, where practicable, enclosed within temporary sheds. 				

Mitigation Measure	Applicability ¹	Description of Mitigation Measure	Monitoring and Reporting Procedure	Mitigation Timing ²		Monitoring and Reporting Responsibility
		<ul style="list-style-type: none"> The University shall require that a temporary wooden wall be placed around construction activity areas that are within 150 feet of sensitive receptors to provide additional noise attenuation, where feasible. The wall should impede the direct line of site between the noise sources and sensitive receptors. The University shall require that construction-related material haul trips access the campus via Natural Bridges Drive and Delaware Avenue in order to minimize noise exposure to residential land uses. The University shall identify potential noise impacts related to construction of long-term projects proposed under the CLRDP, and develop project-specific noise mitigation measures as may be necessary. The University shall take into account the location of the five campus facilities that will have been developed in the near-term as well as off-campus developments nearby. The analysis shall also take into account the sequence in which long-term projects are to be constructed and shall identify appropriate mitigation, as may be required. These future facilities may be sensitive receptors or may act as barriers to noise approaching other sensitive receptors. 	<p>Conduct project-specific noise analysis and develop appropriate mitigation measures, as necessary.</p>	<p>DE</p>	<p>During CEQA process for long-term projects</p>	<p>Physical Planning and Construction</p>
Transportation and Traffic						
<p>4.15-1</p>	<p>G</p>	<p>University shall contribute its fair share (see definition of fair share on page 4.15-33) toward the cost of improvements to the intersection of Mission and Bay Street which would include re-striping the southbound Bay Street approach (which currently includes a left-turn and shared left-turn/through/right lane) to provide a separate right-turn lane, a shared through-left lane, and a left-turn lane. With this improvement, intersection operations would improve to LOS D with 37.7 second of delay in the peak hour.</p>	<p>For each project proposed under the CLRDP, analyze number of peak hour trips added to this intersection by the project.</p> <p>Negotiate with City and Caltrans to determine an appropriate fair share contribution towards necessary road improvements.</p>	<p>DE</p> <p>CO</p>	<p>During project-level environmental review</p> <p>When City and/or Caltrans proposes improvement at this intersection</p>	<p>Physical Planning and Construction</p> <p>Physical Planning and Construction</p>

Mitigation Measure	Applicability ¹	Description of Mitigation Measure	Monitoring and Reporting Procedure	Mitigation Timing ²		Monitoring and Reporting Responsibility
4.15-2	G	UCSC will contribute its fair-share (see page 4.15-33 for definition of fair share) towards construction of a separate pedestrian path on the north side of Delaware Avenue from Shaffer Road to the existing sidewalk west of Natural Bridges Drive. This improvement could be as simple as installing a raised asphalt curb approximately five to six feet away from the existing curb or edge of pavement with openings to maintain existing drainage. Design and construction of this improvement to close the existing gap in pedestrian facilities in this area can and should be completed by the City of Santa Cruz since Delaware Avenue is under its jurisdiction.	Negotiate with City to determine an appropriate fair share contribution towards necessary road improvements.	OC	Prior to occupancy of first project	Physical Planning and Construction
4.15-3	G	Implement General Mitigation Measure 4.15-1.	No additional procedure required.	--	--	--
4.15-4		The University shall contribute its fair share (see page 4.15-33 for definition of fair share) toward the cost of improvements to the Mission Street/Chestnut Street intersection, which would involve the following modifications: (1) convert the southbound dual right-turn lanes on Mission Street to a single-lane "free" right-turn lane and widen of the west leg of the intersection to accommodate a new 500-foot-long, third lane for merging; or (2) install a triple southbound right-turn lane, which would also require the new merge lane. In both cases, the modifications would require major reconstruction of the intersection, and possibly right-of-way acquisition and building modification/relocation.	For each project proposed under the CLRDP, analyze number of peak hour trips added to this intersection by the project. Negotiate with City and Caltrans to determine an appropriate fair share contribution towards necessary road improvements.	DE CO	During project-level environmental review When City and/or Caltrans proposes improvement at this intersection	Physical Planning and Construction Physical Planning and Construction
4.15-5	G	Implement General Mitigation Measure 4.15-1.	No additional procedure required.	--	--	--
4.15-6	G	Implement General Mitigation Measures 4.15-1 and 4.15-4. In addition, the University shall contribute its fair share (as defined on page 4.15-33) toward the cost of improvements to the intersections at High Street/Western Drive, Empire Grade/Heller Drive, and State Route 1/River Street (SR 9). Mitigation measures include traffic signals at the High	For each project proposed under CLRDP, analyze number of peak hour trips added to these intersections by each project.	DE	During project-level environmental review	Physical Planning and Construction

Mitigation Measure	Applicability ¹	Description of Mitigation Measure	Monitoring and Reporting Procedure	Mitigation Timing ²		Monitoring and Reporting Responsibility
		Street/Western Drive and Empire Grade/Heller Drive intersections. Potential improvements for the State Route 1/River Street (SR 9) intersection will be identified by the City of Santa Cruz.	Negotiate with appropriate jurisdiction to determine an appropriate fair share contribution towards necessary road improvements.	CO	When appropriate jurisdiction proposes improvements at the affected intersection	Physical Planning and Construction
<i>Utilities, Service Systems, and Energy</i>						
4.16-1a	G	All toilets, urinals, showers, and washing machines installed as part of this project shall be specified as low-flush and low-flow in order to reduce onsite water consumption. The University shall install low-flow toilets and urinals that are 1.6 gallon/flush or less and low-flow showers that are 2 gallons per minute (gpm) or less in new development. Further, in all new residential uses washing machines must be certified by the Consortium on Energy Efficiency (CEE) to be water- and energy-efficient (such as those with the Energy Star® label).	Include in construction contracts the requirement for low-flush and low-flow equipment.	CO	Prior to construction	Physical Planning and Construction
4.16-1b	G	If and when the City adopts policies requiring all projects (or all similar institutional or commercial projects) within the water system to offset new water demand or any other water demand reduction policies, the University will consider voluntary compliance with the policy, with appropriate credit being given to account for UCSC's previous water conservation activities (in excess of that accomplished by the similar institutional and/or commercial entities covered by the City policy).	To be determined, based on City policy.	OT	Following the adoption of pertinent policies by the City of Santa Cruz	Physical Planning and Construction
4.16-1c	G	For projects proposed by non-UC entities on the campus, non-UC entities shall be required, through contracts and agreements, to implement General Mitigation Measure 4.16-1a to minimize water usage.	Include stipulated requirements in contract or agreement.	OC	Prior to occupancy	Business and Administrative Services
4.16-1d	N/A	The City can and should identify and develop new water supplies to reliably accommodate increases in water supply due to UCSC Marine Science Campus CLRDP-related growth and other background growth during normal and drought conditions.	Outside the jurisdiction of UCSC.	--	--	City of Santa Cruz

**TABLE 5-1 (Continued)
COASTAL LONG RANGE DEVELOPMENT PLAN
MITIGATION MONITORING PROGRAM
PART B: CLRDP MEASURES**

CLRDP Measure	Applicability¹	Description of CLRDP Measure	Monitoring and Reporting Procedure	Mitigation Timing²		Monitoring and Reporting Responsibility
<i>Aesthetics</i>						
Siting and Design Guidelines	PS	Review project siting and design for consistency with on Land Use Diagram in Figure 5.2, Design Guidelines in Chapter 6, Prototypes in Chapter 7, and Implementation Measures under Policies 4.1 through 4.4.	Develop checklist for siting and design review.	OT	Prior to design of first project planned under CLRDP	Physical Planning and Construction
			Review project siting and design for conformance with checklist. Revise plans as necessary to conform to guidelines.	SS, DE	Prior to final design approval	Physical Planning and Construction
<i>Agricultural Resources</i>						
Oversizing of Utility Lines Prohibited	PS	IM 2.1.1: The University will limit utilities on the campus to the size necessary to serve only the projected needs of the campus. IM 2.2.3: The University will limit utility capacity as set forth in Implementation Measure 2.1.1 in order to assure that public service and facility expansions and non-agricultural development do not impair agricultural viability.	Review project plans for sizing of utilities. Revise plans if necessary to limit size to projected needs of campus.	SS, DE	Prior to final design approval	Physical Planning and Construction

¹ PS = project-specific; G = general campus measure, not tied to individual projects; IM = CLRDP Implementation Measure

² Project stage at which implementation of the measure is required: PP = project planning; SS = during site selection; DE = during detailed project planning or project design prior to project approval; CO = prior to or during construction; OC = prior to occupancy; OP = during operation; OT = other

CLRDP Measure	Applicability ¹	Description of CLRDP Measure	Monitoring and Reporting Procedure	Mitigation Timing ²		Monitoring and Reporting Responsibility
Utility Prohibition Zone	G/PS	IM 2.1.2: The University will establish and maintain a one-foot utility prohibition zone at the western edge of the site wherein no new sewer or water utility lines will be allowed.	Record utility prohibition zone on campus planning maps. Review project plans for compliance with utility prohibition zone. Revise plans, if necessary, so that project is compliant.	OT DE	Before beginning construction under CLRDP Prior to final design approval	Business and Administrative Services Physical Planning and Construction
Setbacks from Adjacent Agricultural Uses (Policy 2.2)	PS	Siting in relation to setbacks from agricultural uses will conform to Policy 2.2 (300 feet for non-residential uses north of the California Department of Fish and Game Marine Wildlife Center, 200 feet for non-residential uses at and south of the Marine Wildlife Center, and 500 feet for residential development)	Review project plans for consistency with setbacks. Revise plans, if necessary, to comply with setbacks.	SS, DE	Prior to final design approval	Physical Planning and Construction
Agreement with Younger Ranch Owners	G	IM 3.8.2: Prior to start of construction of any CLRDP facilities located north of the existing National Marine Fisheries Service Laboratory, the University will offer to enter into an agreement with the owners of the Younger Ranch, adjacent to the Marine Science Campus, to indemnify and hold harmless the owners, lessees, and operators of the ranch from liability and costs resulting from the effect of normal and necessary farm operations upon the Marine Science Campus and its employees, students, agents, and invitees.	Initiate negotiations with owners of Younger Ranch to enter into agreement.	OT	Before construction of facilities located north of existing NMFS facility	Physical Planning and Construction
Air Quality						
Transportation Demand Management	TDM	Implement TDM measures as described in Policies 5.2 through 5.8.	(Refer to Traffic/Circulation measures, below. No additional procedures required)	--	--	--

CLRDP Measure	Applicability ¹	Description of CLRDP Measure	Monitoring and Reporting Procedure	Mitigation Timing ²	Monitoring and Reporting Responsibility	
<i>Biological Resources</i>						
Resource Management Plan	G/PS	Implement Resource Management Plan.	Implement monitoring procedures specified in Tables 1, 4, 5, 6, 7, 8, 11, and 12 of the Resource Management Plan. Document results and include documentation in annual mitigation monitoring report.	OT	As specified in Table 13 of the Resource Management Plan	Physical Plant
Stormwater Concept Plan	G/PS	Implement Stormwater Concept Plan.	Refer to Hydrology and Water Quality measures, below. No additional procedures required.	--	--	--
Protection of YLR and Terrace ESHA from Visual Intrusion, Lighting	PS	Implement Policies 4.3 and 4.4 and the Implementation Measures under these policies, concerning protection of wildlife from visual intrusion and lighting.	These measures will be included in the siting and design checklist developed under Siting and Design Guidelines (see Aesthetics, above). No additional procedures required.	--	--	--
Noise Protection for Sensitive Habitats	PS	IM 3.4.2: Buildings and parking lots will be designed so that noise sources are at least 100 feet from ESHA located in the terrace portion of the Marine Science Campus. IM 3.4.3: YLR will not be exposed to noise generated by human activity on the terrace portion of the Marine Science Campus in excess of 60 dBA CNEL, as measured at the boundary of the YLR.	Review project design for location of noise sources relative to terrace ESHAs (see IM 3.4.1). As part of environmental review, estimate project noise levels at YLR and impose mitigation measures as appropriate.	SS, DE	During environmental review	Physical Planning and Construction

CLRDP Measure	Applicability ¹	Description of CLRDP Measure	Monitoring and Reporting Procedure	Mitigation Timing ²		Monitoring and Reporting Responsibility
Protection and Enhancement of YLR Habitats	G	IM 3.5.1: The University will protect and enhance native plant and animal habitats of Younger Lagoon Reserve by controlling and removing weeds, promoting the abundance and diversity of native plant species through small-scale plantings and re-vegetation of areas where exotics have been removed, implementing the Stormwater Concept Plan, maintaining the existing security fencing and providing additional fencing as needed to control trespass from the terrace portion of the site into YLR, and limiting access by humans and domestic pets.	Implement Resource Management Plan (see above for procedures). Implement Stormwater Concept Plan (see Hydrology and Water Quality, below, for procedures). Control and remove weeds, plant native plants	--	--	--
Protection of Special Status Species in YLR	G	IM 3.5.2: The University will protect and enhance habitats for special status animal species that use Younger Lagoon Reserve.	Implement Resource Management Plan (see above for procedures). Implement EIR Mitigations PS 4.4.1, PS 4.4.2 and PS 4.4.3 (see Table 5-1, Part A)	--	--	--
Protection of Stream and Riparian Resources	G	IM 3.5.2: The University will protect the biological productivity and quality of stream and riparian areas by minimizing the effects of storm water discharges and entrainment, controlling runoff, preventing depletion of ground water supplies, maintaining natural vegetation buffer areas and minimizing alteration of natural streams.	Implement Stormwater Concept Plan (see Hydrology and Water Quality, below, for procedures). Implement Resource Management Plan (see above for procedures).	--	--	--
Controlled Public Access to YLR	G	IM 3.6.1: The University will provide visual access to Younger Lagoon Reserve for the general public (overlooks) and limited physical access by authorized management, emergency, research, or student personnel, consistent with the public access and recreation diagram and policies contained in this CLRDP and with illustrative plans for overlooks contained in Appendix C.	See Implementation Measure 6.2.1 under Recreation, below. No additional procedures required.	--	--	--

CLRDP Measure	Applicability ¹	Description of CLRDP Measure	Monitoring and Reporting Procedure	Mitigation Timing ²	Monitoring and Reporting Responsibility	
<i>Cultural Resources</i>						
Conservation of Cultural Resources	PS	IM 3.9.1: Should archaeological resources be disclosed during any construction on the Marine Science Campus, all activity that could damage or destroy these resources will be temporarily suspended until the site has been examined by a qualified archaeologist and mitigation measures have been developed that address the impacts of the project on archaeological resources.	Include in construction contract the requirement that work be suspended if archaeological resources are disclosed.	CO	Before beginning construction	Physical Planning and Construction
			Contract with qualified archaeologist to develop appropriate mitigation measures.	OT	If archaeological resources are disclosed	Physical Planning and Construction
<i>Geology and Soils</i>						
Coastal Bluff Protection	PS	IM 3.7.1: A setback of 100 feet will be maintained for buildings and facilities along the coastal bluff in recognition of potential geologic coastal cliff erosion and to minimize the risk to human life. Development in the cliff setback will be limited to existing streets, existing and proposed pedestrian and bicycle pathways, and infrastructure improvements such as seawater system facilities that are consistent with the CLRDP.	Review project plans and design for conformance with setback. Revise project plans and design if necessary for conformance.	SS, DE	Prior to final design approval	Physical Planning and Construction
<i>Hazards and Hazardous Materials</i>						
Hazardous Materials Management	G	IM 3.10.1: The University, through the Office of Environmental Health and Safety, will manage the use, and in the event of spillage, the containment and cleanup of, hazardous materials and petroleum on the UCSC Marine Science Campus in compliance with federal and state regulations related to the storage, disposal, and transportation of hazardous substances.	For UC entities, continue to implement UCSC Environmental Health and Safety programs involving oversight of individual units' compliance efforts and advising on improvements in procedures related to storage, disposal, and transportation of hazardous substances.	OP	Ongoing, frequency varies with the type and quantity of hazardous materials	Environmental Health and Safety

CLRDP Measure	Applicability ¹	Description of CLRDP Measure	Monitoring and Reporting Procedure	Mitigation Timing ²		Monitoring and Reporting Responsibility
			Document activity of relevant Environmental Health and Safety programs. For non-UC entities, see EIR Mitigation PS 4.7-1 (see Table 5-1, Part A)	OP --	Annually --	Environmental Health and Safety --
Protective Measures for Maintenance and Laydown Area	PS	IM 3.10.2: The University will install appropriate features around the perimeter of maintenance and laydown areas to ensure that accidental spills of hazardous materials does not enter the storm water drainage system or groundwater.	Review project plans and design for appropriate features. Revise project plans and design if necessary to contain spills.	DE	Prior to final design approval	Physical Planning and Construction
Hydrology and Water Quality						
Stormwater Concept Plan	G/PS	The University will design the storm water system on the Marine Science Campus using a combination of good site planning, source control and treatment best management practices, and engineered storm water treatment systems to achieve water quality objectives, as discussed in the Stormwater Concept Plan (Appendix D). Storm water ponds constructed on the Marine Science Campus will be sized for water quality, and where feasible these ponds will be supplemented with vegetated filter strips and swales to further improve water quality. The drainage systems for parking lots will also include an engineered storm water treatment system or equivalent system designed to treat urban contaminant runoff. Implement Best Management Practices (BMPs) as specified in the Stormwater Concept Plan.	Incorporate drainage improvements and engineered stormwater treatment systems into project plans as specified in the concept drainage plans in the Stormwater Concept Plan and in Section 9.4 of the CLRDP.	DE	During project design phase	Physical Planning and Construction
			Review project design for consistency of drainage features with criteria and performance standards in Stormwater Concept Plan. Revise project design as necessary to conform to Stormwater Concept Plan.	DE	Prior to final design approval	Physical Planning and Construction
			Document implementation of best management practices.	OP	Annually	Physical Plant and EH&S

CLRDP Measure	Applicability ¹	Description of CLRDP Measure	Monitoring and Reporting Procedure	Mitigation Timing ²		Monitoring and Reporting Responsibility
		<p>The University will sample storm water discharges on the Marine Science Campus during at least one storm event each winter. Storm water will be tested to ensure that it meets the Regional Water Quality Control Board’s water quality objectives as specified in the Stormwater Concept Plan.</p> <p>The University will undertake maintenance activities on the Marine Science Campus for all components of the storm water system, as specified in the Stormwater Concept Plan.</p>	<p>Prepare stormwater monitoring and maintenance plan.</p> <p>Conduct water quality sampling and testing</p> <p>If changes are noted relative to baseline conditions, take action to identify the cause. Modify BMPs where warranted and necessary to address the identified water quality issue.</p> <p>Conduct maintenance of engineered treatment systems, stormwater ponds, vegetated swales, and vegetated filter strips according to guidelines included in Stormwater Concept Plan.</p> <p>Document maintenance activities.</p>	<p>CO</p> <p>CO, OP</p> <p>OP</p> <p>OP</p> <p>OP</p>	<p>Before occupancy of any project under the CLRDP</p> <p>Before beginning construction on any project under the CLRDP. Then annually or as required by stormwater monitoring and maintenance plan</p> <p>Immediately after receiving laboratory results</p> <p>During occupancy, on schedule specified in Stormwater Concept Plan or specific drainage plan</p> <p>Annually, during occupancy</p>	<p>EH&S</p> <p>EH&S</p> <p>Physical Plant</p> <p>Physical Plant</p> <p>Physical Plant</p>

CLRDP Measure	Applicability ¹	Description of CLRDP Measure	Monitoring and Reporting Procedure	Mitigation Timing ²		Monitoring and Reporting Responsibility
Seawater System	G/PS	IM 7.1.8: The University will ensure that seawater pumped onto the site is contained and discharged so as not to impact freshwater resources and upland habitats on the Marine Science Campus.	For sites with seawater use, review project plans and design for facilities using seawater. Revise plans and design as necessary to provide adequate containment and discharge facilities as well as spillage prevention features.	DE	Prior to final design approval	Physical Planning and Construction
Irrigation and Use of Chemicals for Landscaping	G	IM 7.1.9: The University will ensure that any water used for the irrigation of landscaping on the Marine Science Campus does not cause significant erosion and that any chemicals used for fertilizer and weed and pest control do not enter habitat areas or the ocean in sufficient concentrations to harm wildlife or degrade their habitat.	Establish polices for irrigation and use of chemicals in landscaping to minimize erosion potential and runoff into habitat areas or the ocean.	OC	Before occupancy of first project developed under the CLRDP	Physical Plant
Inspections after Storm Events	G	IM 7.2.1: The University will inspect the Marine Science Campus after major storm events to ensure that the integrity of the drainage system is maintained.	Conduct and document inspections.	OP	After major storm events, during occupancy	Physical Plant
Discharge to YLR	PS	IM 7.3.1: Storm water discharge facilities that discharge into YLR will be designed to accommodate the 100-year storm event.	Review project plans and design for discharge into YLR. Review plan and design as necessary to accommodate the 100-year event.	DE	Before final design approval	Physical Planning and Construction
Land Use						
Impervious Coverage	PS	IM 2.3.2: The University will maintain at least 30 percent of land area within each of the three development clusters designated for Research Education Mixed Use (i.e., the Lower, Middle, and Upper Terrace) free of impervious surfaces.	Review project plans and design for impervious surface. Revise plans if necessary to keep impervious surface within the limit.	DE	Before final design approval	Physical Planning and Construction

CLRDP Measure	Applicability ¹	Description of CLRDP Measure	Monitoring and Reporting Procedure	Mitigation Timing ²	Monitoring and Reporting Responsibility	
Recreation						
Trail Construction	PS	The University will improve existing public and controlled access trails and construct new public trails on the Marine Science Campus consistent with CLRDP Section 5.6 and Figures 9.1 and 9.2.	Include trail construction in project plans consistent with the timing of trail improvements shown on Figure 9.2.	PP	During project planning	Physical Planning and Construction
			Review design of trails for consistency with Design Guidelines (Section 6.4). Revise design if necessary to conform with guidelines.	DE	Prior to final design approval	Physical Planning and construction
			Document completion of trail improvements.	OC	Prior to occupancy	Physical Planning and construction
Accommodation of Coastal Access Visitors	G	IM 6.1.1: The University will establish procedures consistent with Policy 6.1 that provide for admission of members of the public to the Marine Science Campus for purposes of viewing the scenic coastal vistas and overlooks and participating in educational programs and docent-led tours of the site.	Document consistency of procedures with Policy 6.1.	OP	Annually, following approval of the CLRDP	Seymour Discovery Center
Overlooks for Public Visual Access	PS	IM 6.1.3: The University will construct and maintain overlooks to provide the public with visual access of natural resources on and adjacent to the Marine Science Campus such as YLR and the ocean. The location of overlooks will be as specified in Figure 5.5, and the University will be guided by the illustrations contained in Appendix C of this CLRDP as it designs the overlooks.	Include construction of and improvements to overlooks A, D and E in project plans (for first new building constructed on Lower or Middle Terrace).	PP	During project planning	Physical Planning and Construction
			Review location and design of overlooks for consistency with CLRDP Figure 5.5 and Appendix C. Revise design if necessary to conform to CLRDP.	DE	Prior to final design approval	Physical Planning and Construction
			Document completion of overlook construction.	OC	Prior to occupancy	Physical Planning and Construction

CLRDP Measure	Applicability ¹	Description of CLRDP Measure	Monitoring and Reporting Procedure	Mitigation Timing ²		Monitoring and Reporting Responsibility
Docent-Led Tours and Education Programs for the Public	G	IM 6.1.4: The University will seek to support and enhance public appreciation of coastal resource values through educational programs and docent-led tours of the site. The Seymour Center will continue as the site of educational programs on the marine environment for school groups and other members of the public. As resources are available, these programs will continue to include docent-led tours of the coastal terrace and bluff and the Younger Lagoon Reserve overlooks.	Document continued educational programs and docent-led tours.	OP	Annually	Seymour Discovery Center
Access to Resource Protection Areas	G	IM 6.2.1: Public access to identified Resource Protection Areas will be managed to protect against disruption of habitat values. Only authorized personnel will be allowed in such areas, except that public access may be gained with the University’s written authorization. Authorization will be granted only on a temporary basis and only for personnel necessary for activities consistent with uses allowed by the Land Use Plan. The University may use any combination of devices it deems necessary to protect natural resources in Resource Protection Areas, including fences, walls, berms, and vegetation.	Document access policies and procedures. Enforce access policies.	OP	Annually	Physical Plant
Bicycles on Marine Science Campus	G	IM 6.2.6: The University will allow the use of bicycles on the Marine Science Campus, except on “Controlled Access Trails.”	Document access policies and procedures.	OP	Annually	UCSC Police Department
Domestic Pets	PS/G	IM 6.2.7: Cats and dogs and other domestic pets will not be kept or brought temporarily onto the Marine Science Campus.	Include prohibition on pets in lease agreement for on-site housing. Use signs and other media to inform public that pets are not permitted on the campus.	OC	Prior to occupancy	College and University Housing Services
				OT	Within one year of approval of CLRDP	Physical Plant

CLRDP Measure	Applicability ¹	Description of CLRDP Measure	Monitoring and Reporting Procedure	Mitigation Timing ²		Monitoring and Reporting Responsibility
Public Access Signage	G	IM 6.2.8: Signage and other media will be used to provide visitors with information about coastal resources, identify the location of public trails, and warn of dangers in the environment. Signage will also be provided to identify Controlled Access Trails, with information about supervised tours.	Maintain existing signs and provide new signage and other media. Document their content and distribution.	OT	As new trails are developed	Physical Plant and Seymour Discovery Center
Transportation Demand Management	G	Implement Transportation Demand Management (TDM) measures as detailed in Policies 5.3 through 5.8, including provision of a limited number of parking spaces, requiring permits for parking, provision of facilities for bicyclists and pedestrians, working with SCMTD to increase frequency of transit service, increased frequency of shuttle service to the UCSC main campus as warranted by demand, development of bus turnarounds and covered transit stops, and services and programs to promote carpools and vanpools.	Document implementation of TDM measures	OP	Annually	TAPS
<i>Utilities, Service Systems, and Energy</i>						
Oversizing of Utility Lines Prohibited	PS	IM 8.1.1: The University will size utilities and services to the Marine Science Campus, including water, sanitary sewer service, storm water systems, and electrical and communication lines, consistent with and limited to accommodating the building program set forth in this CLRDP. The capacity of these utilities will be consistent with the utilities program described in Subsection 5.8.1 of this CLRDP.	Refer to procedures for IMs 2.1.1 and 2.2.3, under Agricultural Resources, above. No additional procedure required.			
Installation of New Utility Lines and Facilities	PS	IM 8.2.1: The University will install new underground utility lines and facilities through wetlands and riparian corridors only when there is no feasible less environmentally damaging alternative and where feasible mitigation measures have been provided to minimize adverse environmental effects.	Review project plans and design for underground utilities through wetlands and riparian corridors. Revise plans if necessary to provide a less environmentally damaging alternative.	DE	Prior to final design review	Physical Planning and Construction

CLRDP Measure	Applicability ¹	Description of CLRDP Measure	Monitoring and Reporting Procedure	Mitigation Timing ²		Monitoring and Reporting Responsibility
			If a less damaging alternative is not feasible, include mitigation measures as part of project design.			
Seawater System	G	IM 8.2.2: The University will operate the seawater system in a manner that will protect against spillage and that will sustain the biological productivity and quality of coastal waters, streams, and wetlands.	Refer to procedures for IM 7.1.8 under Hydrology and Water Quality, above. No additional procedures required.	--	--	--

**TABLE 5-2
SHARED CAMPUS WAREHOUSE AND LAYDOWN FACILITY
MITIGATION MONITORING PROGRAM**

Mitigation Measure	Applicability ¹	Description of Mitigation Measure	Monitoring and Reporting Procedure	Mitigation Timing ²		Monitoring and Reporting Responsibility
4.11-3	PS	<p>As part of the design of the Shared Campus Warehouse and Laydown Facility, the University shall implement noise control measures to reduce the resulting noise levels to 65 DNL or lower at future campus housing planned for the upper terrace development area. Control measures incorporated into the design and location of the Shared Campus Warehouse and Laydown Facility may include but not be limited to the following:</p> <ul style="list-style-type: none"> • The University shall orient the warehouse so as to shield noise generated by activity at the Shared Campus Warehouse and Laydown Facility, from potential sites of future campus housing on the upper terrace development area. • The University shall incorporate an easy turn-around for trucks such that they can avoid maneuvering in reverse and thus minimize back-up alarm noise. • Once the future campus housing planned for the upper terrace becomes inhabited, the University shall limit noisy outdoor activities (such as those involving the use of heavy equipment) at the warehouse and laydown area from 10:00 PM to 6:00 AM all days of the week. • The University shall construct a wall around the laydown area, consistent with CLRDP guidelines, to attenuate noise levels at future campus housing planned for the upper terrace development area. The wall shall be completed before the future campus housing planned for the upper terrace is occupied. 	<p>Review noise control measures included in project design. Revise control measures if necessary.</p> <p>Develop and implement policy limiting noisy outdoor activities.</p> <p>Construct wall around laydown area.</p>	DE	During design of warehouse and laydown facility	Physical Planning and Construction
				OC	Prior to occupancy of campus housing	College and University Housing Services
				OC	Prior to occupancy of campus housing	Physical Planning and Construction

¹ PS = project-specific; G = general campus measure, not tied to individual projects; IM = CLRDP Implementation Measure

² Project stage at which implementation of the measure is required: PP = project planning; SS = during site selection; DE = during detailed project planning or project design prior to project approval; CO = prior to or during construction; OC = prior to occupancy; OP = during operation; OT = other

Mitigation Measure	Applicability ¹	Description of Mitigation Measure	Monitoring and Reporting Procedure	Mitigation Timing ²		Monitoring and Reporting Responsibility
4.11-5	PS	The University shall require that construction contractors limit construction activity for the Shared Campus Warehouse and Laydown Facility to the hours between 7:00 AM and 10:00 PM all days of the week.	Include time limit in contractor specifications for project.	CO	Prior to construction of Shared Campus Warehouse and Laydown Facility	Physical Planning and Construction

**TABLE 5-3
USGS WESTERN COASTAL AND MARINE GEOLOGY FACILITY
MITIGATION MONITORING PROGRAM**

Mitigation Measure	Applicability ¹	Description of Mitigation Measure	Monitoring and Reporting Procedure	Mitigation Timing ²		Monitoring and Reporting Responsibility
4-11-2	PS	As part of the design of USGS Western Coastal and Marine Geology Facility, the University shall implement noise control measures in the design of the HVAC systems to reduce the resulting noise levels to 65 DNL or lower at the 42 Apartment/Townhouse units. Control measures for HVAC noise could include, but would not be limited to, the following: use of quiet HVAC models, use of sound barriers around the equipment, and/or orientation of HVAC systems away from sensitive receptors.	Review project plans and design for noise control measures. Revise plans if necessary to include noise control measures.	DE	Before final design approval	Physical Planning and Construction
4-11-6	PS	<p>If the 42 Apartment/Townhouse Units are developed and occupied before construction of the USGS Western Coastal and Marine Geology facility, the University shall require that construction contractors implement the following measures:</p> <ul style="list-style-type: none"> Contractors shall notify all residents of the 42 Apartment/Townhouse Units that will be subject to construction noise from the development of the USGS facility one week before the start of construction activity. To the extent feasible, loud construction activity (i.e., jackhammering, concrete sawing, asphalt removal, and large-scale grading operations) within 150 feet of the 42 Apartment/Townhouse Units shall occur during daytime hours (7:00 AM to 5:00 PM). To reduce noise impacts from construction, contractors shall muffle or otherwise control noise from construction equipment through implementation of the measures below. 	Include the required measures in the contractor specifications for the USGS facility.	CO	Before construction of the USGS facility begins	Physical Planning and Construction
			Inspect construction site to verify the measures are being implemented.	CO	Weekly during construction	Physical Planning and Construction

¹ PS = project-specific; G = general campus measure, not tied to individual projects; IM = CLRDP Implementation Measure

² Project stage at which implementation of the measure is required: PP = project planning; SS = during site selection; DE = during detailed project planning or project design prior to project approval; CO = prior to or during construction; OC = prior to occupancy; OP = during operation; OT = other

Mitigation Measure	Applicability ¹	Description of Mitigation Measure	Monitoring and Reporting Procedure	Mitigation Timing ²		Monitoring and Reporting Responsibility
		<ul style="list-style-type: none"> - Internal combustion engines used for any purpose at the construction sites shall be equipped with a muffler of a type recommended by the manufacturer. - Equipment used for construction shall utilize the best available noise control techniques (e.g., improved mufflers, equipment redesign, use of intake silencers, ducts, engine enclosures, and acoustically-attenuating shields or shrouds, wherever feasible); - Impact tools (e.g., jack hammers, pavement breakers, and rock drills) used for construction shall be hydraulically or electrically powered wherever feasible to avoid noise associated with compressed air exhaust from pneumatically powered tools. However, where use of pneumatic tools is unavoidable, an exhaust muffler on the compressed air exhaust shall be used. Such mufflers can lower noise levels from the exhaust as much as 10 dBA. External jackets on the tools themselves shall be used where feasible, and this could achieve a reduction of 5 dBA. Quieter procedures such as using drilling equipment rather than impact equipment shall be implemented whenever feasible. - Stationary noise sources shall be located as far from sensitive receptors as feasible. If they must be located near sensitive receptors, they shall be muffled to the extent feasible and/or, where practicable, enclosed within temporary sheds. • The University shall require contractors to install a temporary wooden wall around construction activity areas that are within 150 feet of inhabited residences to provide additional noise attenuation, where feasible. The wall should impede the direct line of site between the noise sources and first floor sensitive receptors. 				