Exhibit F: UCSC-Addendum to CLRDP submitted 3/28/06

March 28, 2006
University of California Marine Science Campus
Coastal Long Range Development Plan

Addendum to the CLRDP
as submitted to the California Coastal Commission
on January 25, 2006

A. Continuing Disagreement Regarding Disproportionate Measures to Enhance Protection for California Red-Legged Frog (CLRDP Page 130, plus various other pages)

1. Continuing discussion regarding further measures to enhance protection for the California red-legged frog has resulted in an impasse with Coastal Commission staff. In its simplest form, the University's argument is that a larger 90-meter wildlife corridor (the University proposes a corridor that varies from 40 meters to 60 meters) is unsupported by USFWS and disproportionate to the low likelihood that CRLF would be adversely affected by development of the full Upper Terrace envelope proposed in the CLRDP. In hopes of finding middle ground, the University is appealing directly to the Coastal Commission to consider the following counter-proposal.
   a. First, the University will agree to a revised Implementation Measure 3.2.11 that requires consultation with USFWS prior to development practically anywhere on the Marine Science Campus.
   b. Second, the University will agree to undertake protocol surveys for California red-legged frog on an annual basis in the Upper Terrace until construction of the first building in Subarea #1 (as shown in Fig 5.4) commences.
   c. Third, the University will, in consultation with the USFWS and the Executive Director, set an appropriately sized wildlife corridor at the time of development (NOID process); the University will also set an appropriate setback from culvert on neighboring property, which sporadically is host to juvenile CRLF.
   d. Finally, the University will continue its commitment to all habitat improvements and the timing of implementing such improvements, in the area north of Delaware Avenue Extension.

B. **Continuing Disagreement on Continued Protection for Younger Lagoon Reserve (CLRDP Page 150; various other pages)**

1. Continuing discussion regarding the need for controlled access to all of Younger Lagoon Reserve, including its beach above mean high tide, has resulted in an impasse with Coastal Commission staff. Protection of Younger Lagoon Reserve ESHA. The University continues to argue that:
   a. Controlled access to YLR and YLR Beach should be continued
   b. All of YLR should be defined as ESHA

C. **Continuing Disagreement on the Need for Metered Parking for Public Access (CLRDP Page 145; various other pages)**

1. Continuing discussion regarding the need for metered parking has resulted in an impasse with Coastal Commission staff. The University continues to argue that:
   a. Use of meters necessary to ensure public access parking isn't misused by students and others studying and/or working on the campus
   b. Same accommodation made for UC Santa Barbara should be afforded UC Santa Cruz

D. **Continuing Disagreement on the Amount of Screened Enclosure Needed for Roof-Top Mechanical Equipment (CLRDP Page 136)**

1. Continuing discussion regarding the need for rooftop enclosures for mechanical equipment has lead to an impasse with Coastal Commission staff. The University argues that 20 percent of building's ridgeline (The University has in the past proposed 30%) is insufficient for University laboratory buildings. In the interest in finding middle ground, the University is appealing directly to the Coastal Commission to consider the following proposal:
   a. UC will limit the size of screened rooftop enclosures for mechanical equipment to 25% of the length of a building's ridgeline

E. **Continuing Disagreement over Measures to Protect Buffer Areas from Visual Intrusion (CLRDP Page 138)**

1. Continued discussion regarding the need to protect buffer areas from visual intrusion has lead to an impasse with Coastal Commission staff. The University continues to argue that the standard for protecting buffer areas from significant disruption is

inconsistent with the purpose of the buffer (should not have to buffer the buffer areas)

F. **Continuing Disagreement Over the Timing of habitat enhancements in the Upper Terrace (CLRDP Page 128)**

1. Continued discussion regarding the uncertainty of development in the Upper Terrace and the nexus between development and habitat improvements has lead to an impasse with Coastal Commission staff. Absent a compromise along the lines expressed in Item H above, the University hereby revises the CLRDP to more clearly establish the nexus between development in the Upper Terrace as follows:
    a. Change text in various chapters of the CLRDP to tie all habitat and capital improvements in the Upper Terrace improvements to new development in the Upper Terrace Development Zone.

G. **Continuing Disagreement Over Time Frame for Research-Level Water Quality Testing (Addendum Pages 10, 11)**

1. Continued discussion regarding staff's proposal to extend short-term, research-level water quality testing has lead to an impasse with Coastal Commission staff. The University continues to argue that the CLRDP's one-time intensive research-level water quality monitoring program should not be extended beyond the three-year period.

H. **Agreed Upon Clarifications.**

1. Further clarifications regarding biological studies performed for the site, existing parking, Chapter 5 Figures, and miscellaneous technical corrections have been agreed to by staff and the University, resulting in the replacement of the following pages (Exhibit 1):
    a. Chapter 2, page 26 (correct existing parking numbers).
    b. Chapter 3, pages 12, 13 (biologic resources description).
    c. Chapter 3, page 15 (biotic resources figure).
    d. Chapter 3, page 18 (biologic resources description).
    e. Chapter 3, page 30 (combined constraints figure).
    f. Chapter 4, pages 33, 34 (wetland protection concept).
    g. Chapter 5, page 2 (Chapter 5 Figures).
    h. Chapter 5, Figures 5.2 and 5.4.
    i. Chapter 5, page 14 (wetland definition)

j. Chapter 5, page 22 (scenic protection)
k. Chapter 5, page 23 (building heights)
l. Chapter 5, page 27 (correct existing parking numbers/allocation).
m. Chapter 5, page 28 (correct existing parking numbers/allocation).
n. Chapter 5, page 32 (correct existing parking numbers).
o. Chapter 6, page 6 (parking design).
p. Chapter 6, page 14 and 15 (lighting/fencing design).
q. Chapter 6, page 16 (fencing).
r. Chapter 6, Figure 6.8, (fencing design and Location).
s. Chapter 8, page 9 (CCC review of projects).
t. Chapter 8, Page 11 (minor technical correction).
u. Chapter 8, page 16 (non-conforming structures).

I. Agreed Upon Modifications related to Future Wetland Verification

1. Further discussion regarding verification of wetland resources at the time of development has resulted in agreement on the following modification of Implementation Measure 3.3.1:

Implementation Measure 3.3.1 -- Pre-development Evaluation of Wetland Conditions. *An evaluation of the development area shall be conducted prior to each development project. The evaluation shall include any changed site conditions that could affect wetland values protected by this CLRDP. A wetland evaluation shall be completed in the proposed development area (i.e., the proposed development footprint and a surrounding 200-foot buffer area) in consultation with the Executive Director, using the Coastal Act 30121 wetland definition. To the extent wetland areas are identified during this process that are not already designated Resource Protection on Figure 5.2, the Resource Protection designation shall be applied to the newly identified wetland area and uses and development limited in accordance with that designation (see section 5.2.2, Resource Protection). For any newly identified wetland area, an appropriate buffer shall be established, based upon site-specific conditions in accordance with Implementation Measure 3.2.9.*

J. Agreed Upon Modifications related to Permanent Protection for Land Outside of Development Zones (Addendum Page 3)

1. Further discussion regarding permanent protection of areas outside of development zones has resulted in agreement on the following new Policy 3.14.
   a. **Policy 3.14 Permanent Protection**

The University shall maintain, in perpetuity, the land use designations of Resource Protection, Resource Protection Buffer, Open Space, and Wildlife Corridor as shown in Figure 5.2.

K. **Agreed Upon Modifications related to Resource Management.**

1. Further discussion regarding resource management of areas outside of development zones and mitigation of anticipated habitat impacts has resulted in agreement on the following replacement modification for Implementation Measure 3.2.10:

Implementation Measure 3.2.10. – Natural Areas Habitat Management. *Within six (6) months of the date this CLRDP becomes effective, the University in consultation with the Executive Director of the California Coastal Commission shall convene a scientific advisory committee (SAC) to oversee the restoration and management of natural areas (i.e., all areas outside defined development zones, except for Younger Lagoon Reserve) on the Marine Science Campus (see Appendix A). The SAC shall be responsible for developing Specific Resource Plans as described in Appendix A, and shall complete its work on the Specific Resource Plan for Phase I restoration efforts within four (4) months of convening. The content of Specific Resource Plans shall be consistent with the performance standards set forth in Appendix A, which may be adapted periodically based on findings from ongoing restoration work. The University shall file a Notice of Impending Development for Phase I work within one (1) year of the date this CLRDP becomes effective. The timing for subsequent phases shall insure completion of the entire natural areas restoration within 20 years of beginning Phase 1 work as specified in Appendix A.*

2. In addition and related to the new Implementation Measure 3.2.10, the CLRDP, and particularly the CLRDP Resource Management Plan (CLRDP Appendix A) requires corresponding changes throughout the document to account for this agreed upon revised resource restoration and management framework (see Exhibit 2 for illustrative changes). As opposed to identifying direct edits in this respect, the Resource Management Plan (CLRDP Appendix A) and all resource-related CLRDP text, policies, implementation measures, and figures (e.g., within Chapter 5, etc.), as well as all components of the CLRDP that affect or are affected by same, shall be modified as necessary to account for the following requirements:

a. All areas located outside of defined Campus development zones, except for the paved section of roads connecting development zones, shall be restored, enhanced, and managed as high quality open space and natural habitat area.

b. All natural open space area restoration, enhancement, and management shall be guided by a Scientific Advisory Committee (SAC) that is made up of independent professionals and academicians experienced in and knowledgeable about the habitats of the Campus natural open space area that are to be restored, enhanced, and managed (e.g., native grassland, coastal scrub, wetlands, etc.). The SAC shall meet on a regular basis and provide overall direction for restoration, enhancement, and management.

c. All restoration, enhancement, and management of the Campus' natural open space area shall be provided for by Resource Plans developed according to the criteria in the Resource Management Plan and current professional standards for such plans.

d. All Campus natural open space areas shall be restored and enhanced within 20 years following the date of Coastal Commission certification of the CLRDP, with interim benchmarks that at least one-third of this area be restored and enhanced within 7 years, and at least two-thirds of this area be restored and enhanced within 14 years. All such areas restored and enhanced shall be managed as high quality open space and natural habitat area in perpetuity consistent with Policy 3.14.

e. The RMP goals and performance standards may be adjusted as directed by the SAC in coordination with the Executive Director to ensure the success of Campus restoration, enhancement, and management efforts. As such, the RMP goals and performance standards are not static requirements per se so much as initial guidelines that may be refined during the SAC process so long as such refinement is consistent with current professional restoration, enhancement, and management goals and standards, and with achieving high quality open space and natural habitat area in perpetuity consistent with Policy 3.14. RMP adjustments in this respect may require a CLRDP amendment, unless the Executive Director determines that an amendment is not necessary.

L. **Agreed Upon Modifications related to Drainage Management.**

1. Further discussion regarding stormwater and other runoff has resulted in agreement on a revised Drainage Concept Plan (CLRDP Appendix B) framework. Corresponding changes are necessary throughout the document to account for this revised framework. As opposed to identifying direct edits, the Drainage Concept Plan (CLRDP Appendix B) and all drainage-related CLRDP text, policies, implementation measures, and figures (e.g., within Chapter 5, etc.), as well as all components of the CLRDP that affect or are affected by same, shall be modified as necessary to account for the following:
   a. All drainage system components shall be located within Campus development zones with the exception that the non-sediment trap portion of the vegetated stormwater basins may be located outside of development zones, and with the further exception that the non-sediment trap portion of the vegetated stormwater basins is allowed in the area designated resource protection buffer in the two scenarios identified in the Drainage Concept Plan.
   b. Vegetated stormwater basins shall be created by constructing low-profile naturalistic berms to enclose a land area within which non-native and invasive plant species shall be removed and native grasses and other suitable native vegetation capable of enhancing water quality shall be planted consistent with the Resource Management Plan (CLRDP Appendix A). Any portions of such vegetated stormwater basins that are located outside of development zones shall be considered an integral part of the natural open space area within which restoration and management shall apply pursuant to the Resource Management Plan (CLRDP Appendix A), and within which other development is prohibited.
   c. The naturalistic berms to be used to create the enclosed areas within the vegetated stormwater basin areas shall be no higher than 18 inches from natural grade, and shall be no steeper than a three_to one grade. The berms shall include naturalistic spillway areas designed to accommodate the release of detained runoff that exceeds the maximum capacity of the vegetated stormwater basins in a non-erosive manner.

M. Agreed Upon Modifications Related to Temporary Greenhouse Use (CLRDP Page 116)

1. Further discussion regarding continued temporary use of existing greenhouses of the Marine Science Campus has resulted in agreement on a revised land use definition for the "Research and Education Mixed Use" land use designation. The CLRDP shall be modified as follows:

Marine Research and Education Facilities

These are the major facilities associated with the operation of marine research laboratory and educational facilities and are limited to all existing facilities (except facilities specifically identified for removal in Figure 5.1 below), plus a total maximum of up to 254,500 additional square feet of facilities for the following uses:

- Laboratories, wet and dry, connected with the marine sciences,
- Teaching and seminar rooms associated with the marine educational or scholarly activities, and
- Offices in support of the primary laboratory or educational activity
- Organic agriculture as an interim (up to 5 years after CLRDP certification) use in Subarea #6
- Temporary coastal dependent applied science or testing

N. Agree Upon Modifications Related to Bluff Setback

1. Further discussion regarding allowed uses in the bluff top setback area has resulted in agreement on the following replacement modification for Implementation Measure 3.7.1:
   a. Implementation Measure 3.7.1 – Bluff Setbacks. *New development shall be sited and designed in such a manner as to avoid the need for shoreline armoring over the development's lifetime, and shall include enforceable provisions for addressing any future bluff retreat/erosion danger to the development without shoreline armoring (e.g., moving the development, removing the development, etc.). Development within100 feet of the top edge of the coastal bluff shall be prohibited other than existing streets; existing and proposed access and recreation amenities (see Section 5.6 and Figure 5.5); infrastructure improvements necessitating a near bluff edge location contemplated by the CLRDP (i.e., seawater system facilities); minor, non-building research*

infrastructure (e.g. marine mammal pools); habitat restoration/enhancement; and directly related minor structures (such as irrigation, public safety fencing, etc.) that are consistent with the CLRDP.

O. Other Agreed Upon Modifications.

1. The University shall modify the CLRDP as follows:

a. **Final Document Corrections.** In addition to incorporating the required textual and figure modifications identified in suggested modification 1 above, the final CLRDP shall be revised to: include page numbers on all pages; make commensurate revisions to the table of contents; correct typographical and grammatical errors (i.e., including but not limited to incorrect spelling, numbering, punctuation, etc); correct internal reference errors (i.e., to sections, figures, names, etc.); include a consistent and readable format; and use consistent terminology as modified (e.g., refer to all proposed developments covered by a NOID as "proposed development projects," to all CLRDP approvals by the University as "authorizations," etc.).

b. **CLRDP Consistency.** All references to the CLRDP and/or to discrete sections of the CLRDP (such as to the Resource Management Plan) and/or references to some form of consistency to them that include qualifying text (including, but not limited to, such phrases as "in accordance with the standards and measures contained in this CLRDP," "consistency with CLRDP standards," "management measures in the Resource Management Plan," etc.) shall be changed to require consistency with the CLRDP (or the cited CLRDP section) without any qualifying text (e.g., "in accordance with the CLRDP," "consistency with the CLRDP," etc.); provided that where consistency with specifically applicable CLRDP provisions is also intended, wording so indicating shall be preserved.

c. **Campus Boundary and CLRDP Jurisdiction Figure.** The University shall prepare a new figure titled "Campus Boundary and CLRDP Jurisdiction" that shall clearly and accurately depict (consistent with the format of other CLRDP figures) the following: (a) the Campus boundary; (b) to the extent the Campus boundary differs from the boundary of the property owned by the University, the boundary of the property area owned by the University; (c) the boundary of all tidelands,

submerged lands, and/or public trust lands, whether filled or unfilled, on the Campus; (d) the Coastal Commission's area of retained jurisdiction within the Campus boundary and adjacent to it, including the areas in subsection (c); and (e) the area to which the CLRDP applies as the standard of review for development projects (i.e., CLRDP jurisdiction). Such figure shall accurately reflect all other figure modifications and shall be included in CLRDP Chapter 8 following Section 8.7. The University may defer for one year from the effective date of this CLRDP completion of the mapping of information in (c), (d), and (e).

P. Miscellaneous Corrections and Clarifications.

1. Miscellaneous corrections and clarifications are necessary to ensure consistency with the Coastal Act:
   a. Correct existing and additional-at-buildout parking supply numbers where necessary, including figures such as Figure 2.26.
   b. Correct the location of caretaker units on relevant Figures (e.g. 2.26).
   c. Extend the bluff top setback from the top edge of the coastal bluff on relevant figures, including Figure 3.9, to apply to all coastal bluffs consistent with in the criteria for determining the location of the top edge of coastal bluffs in 14 CCR Section 13577.
   d. Clarify that Figures 3.11 and 3.16 show "resource" buffers, and not only wetland buffers.
   e. Depict the general location (i.e., with arrows, text label, etc.) of wildlife movement corridor areas along the northernmost portion of the Campus and extending from Younger Lagoon Reserve to the north and to the northeast on Figures 4.19, 5.2 and other relevant figures.
2. For Figure 5.2:
   a. The area located between the Lower and Middle Terrace development zones, and between Wetland W5 and Younger Lagoon Reserve shall be shown as Resource Protection Buffer.
   b. Extend the 150-foot Wetland W5 buffer to include areas within 150 feet of the wetland to the north (at NOAA Fisheries), up to the boundary of the NOAA in-holding.
   c. Ensure that all legend and graphic depictions are consistent with the CLRDP as modified, consistent internally within the figure, and legible.

3. Delete Upper Terrace development zone from Implementation Measure 2.2.2.
4. Clarify in Chapter 5, pages 13-14 that the resource protection policies and associated implementation measures rely, *in part*, on the RMP.
5. For Figure 5.4:
    a. Make adjustments as necessary to be consistent with Figure 5.2.
    b. Add explanatory language for Figure 5.4 at the end of paragraph 5.4.1 stating that this figure identifies maximum scale and related criteria for buildings and other development in various subareas of the development zones.
    c. Add new Implementation Measure 4.2.15 as follows: Implementation Measures 4.2.15. Development Outside of Identified Subareas. Building development outside of the subareas shown in Figure 5.4 is prohibited. Development outside of the subareas shown in Figure 5.4 and inside of development zones shall be limited to at-grade development (e.g., streets, parking areas, etc.), where any associated above-grade elements (e.g., fencing, light standards, etc.) shall ~~be~~ not exceed the scale, including the heights, established for such elements in the CLRDP.
    d. Delete the reference to Implementation Measure 3.4.4 relative to the Upper Terrace zone.
    e. Change labels as follows: "Allowed No. of Stories" to become "Maximum Allowed Number of Stories," "Height Limit" to become "Maximum Height," "Allowed Footprint" to become "Maximum Building Footprint," "Building Coverage" to become "Maximum Building Coverage"
    f. Delete subarea 17.
    g. Add footnote number 9 and apply that footnote to subarea 2; footnote 9 to state as follows: "Above-grade development shall be concentrated to the south as much as possible."
    h. Add footnote number 10; apply that footnote to subareas 7 and 14, and 16; footnote 10 to state as follows: "Buildings prohibited in this subarea, except that an entryway kiosk is allowed in subarea 16." Replace the "1" noted in the number of stories columns for subareas 7 and 14 with a "--" reference instead.
    i. Expand subarea #16 to the south to include the entry road (extension of Delaware Avenue) and revise the annotation to read: "Parking and kiosk only."

j. Add global footnote to apply to whole figure that states: "Building development outside of subareas is prohibited. Development outside of subareas shall be limited to at-grade development (e.g., streets, parking areas, etc.) and associated above-grade elements (e.g., fencing, light standards, etc.), which shall not exceed the scale, including the heights, established for such elements in the CLRDP."

k. Change the "7" noted under the height limit column for subarea 14 to a "6."

l. Delete the footnote reference to footnote 6 for subarea 16.

6. Update all figures consistent with revised Figures 5.2 and 5.4.
7. Correct references to Figures 5.5 (Circulation), 5.6 (Trails), and other figures as necessary.
8. Clarify that Implementation Measures 5.1.4 and 5.1.5 are contingent on obtaining "necessary" permissions from adjacent property owners, i.e. when development may actually be proposed on this adjacent property.
9. Add trail segment that extends east to west from PT 3 to connect to the trail along the McAllister Way alignment in Figures 5.6 and 9.1 (and in any related figures and text), and consider this trail segment to be a part of public trail PT 3.
10. Strikeout qualifying phrase of first sentence of section 6.3.2 (not necessary with updated Figure 5.2).
11. Update drawings of Chapter 7 to be consistent with Chapter 5 Policies, Implementation Measures, and Figures.
12. Delete sentence starting on page 12 of 30 of CLRDP Chapter 3: "The absence of valuable habitat . . ."
13. References to "drainage ditch" shall be changed to "drainage."
14. Remove all references to a parking area located between the Middle Terrace and Lower Terrace development zones in CLRDP figures and text.
15. Add the following text to the bottom of the paragraph shown on page 33 of 42 of Chapter 4: "The wetland protection concept is shown in Figure 4.19."
16. Modify Implementation Measure 2.4.2 to be clear that references to caretakers trailers include all related development associated with the trailers (e.g., fencing, decking, landscaping, etc.).
17. Add text to section 5.5.1 and all other applicable parts of the CLRDP (including policies and implementation measures) to make clear that Shaffer Road infrastructure improvements shall only be pursued to serve authorized development, and shall not be pursued separate from and/or before development that they are designed to serve has been authorized.

18. Replace phrase "within resource zones" with the phrase "outside of development zones" in the first paragraph at the top of page 14 of 19 of CLRDP Chapter 6.
19. Add "P" label to the parking area located nearest the shoreline on Figure 7.2 to match Figure 5.5 etc.
20. All Resource Management Plan figures shall be updated consistent with the rest of the CLRDP figures and as modified by the Commission's suggested modifications.
21. For the Drainage Concept Plan:
    a. Modify the text on page 1 of Appendix B (Drainage Concept Plan) as follows:

       Appendix B –Drainage Concept Plan

       The purpose of this drainage concept plan is to outline parameters for collecting, detaining, filtering, and treating stormwater and other runoff at the Marine Science Campus. The approach is a hybrid that combines naturalistic Best-Management-Practice (BMP) features such as vegetated filter strips, vegetated swales, and vegetated stormwater basins with conventional BMP features such as engineered stormwater treatment systems and oil and grease traps, into a drainage management system that captures, detains, filters, and treats stormwater and other runoff. Cleansed runoff that doesn't naturally percolate through the naturalistic BMPs would then be directed to wetland and open space areas of the Campus. During periods of unusually heavy storm activity, stormwater basins could hold standing water for as long as 10 days, but since most storm events in the Santa Cruz area occur from October through April, it is expected that basins will be dry by May. BMP features will be vegetated with native perennial grasses and other appropriate plant species, which will be maintained periodically, and when necessary, sediment buildup will be removed from those components of the system located within development zones (and sediment buildup) outside of development zones will be left in place. All maintenance and repair activities, except emergency repairs during storm events, will occur during dry months when strips, swales, and basins are free of standing water.
    b. Modify the text of the Drainage Concept Plan to indicate that, in addition to native grasses, other plant species capable of improving particulate settling and uptake of

dissolve contaminants shall be used in drainage system design and application.

c. Modify the text of the Drainage Concept Plan to indicate that all water quality components of the drainage system shall be sized to meet at least the 85th percentile sizing criteria.

d. Modify the text in the second sentence under vegetated stormwater basins on page 21 of 40 of the Drainage Concept Plan to replace the word "sedimentation" with "settling, infiltration, and biological processes."

e. In the first paragraph of the "Monitoring and Maintenance for Treatment BMPs" section (page 25), replace "drainage" with "stormwater and other runoff" in first sentence, and replace "Central Coast Regional Water Quality Control Board's adopted Basin Plan" with "CLRDP water quality requirements" in the second to last sentence.

f. In the first full paragraph on page 26, change "Stormwater" to "Stormwater and other runoff."

g. Delete references to "stormwater" in two sections that follow under "Visual Observations" (page 28) and "Sampling and Analysis" (page 29).

h. The fifth bullet on page 29 of 40 (Appendix B) shall be revised to read as follows: "Any pollutants identified during the research-monitoring phase. If these pollutants are not detected in significant quantities after two consecutive sampling events, they may be eliminated from future sampling, except that the University shall recheck for such pollutants every five years.

i. Modify the Drainage Concept Plan and related CLRDP text to indicate that permeable porous pavement is required within all parking areas.

j. All Drainage Concept Plan figures shall be updated consistent with the rest of the CLRDP figures and as modified by the Commission's suggested modifications.

22. For new undelineated wetland at Data Point #59:

a. Add the following Implementation Measure: "Undelineated Wetland at Data Point #59. Prior to any development within 150 feet of data point 59 as shown in Attachment 5, Sampling Locations, Phase III of the HBG wetland delineation, the boundaries of any wetland encompassing Data Point 59 shall be delineated in consultation with the Executive Director. The delineated wetland shall be designated Resource Protection and

buffered with a 100-foot buffer designated Resource Protection Buffer. This buffer may be reduced if a site-specific biological evaluation supports a finding that the buffer is sufficient to prevent impacts that would significantly degrade the new wetland resource, and to ensure the continuance of any identified wetland habitat.

b. Indicate general location of Data Point 59 on all relevant Figures, and describe presence of undelineated wetland in all relevant text.

23. Modify Section 8.6.C, first paragraph, by adding the following: "The submittal shall include a mailing list and envelopes in conformity with Section 8.2.E.5 (a) and (b)."

Exhibit G: Figure Changes

Fig. 5.4 Development Subareas (10)

Subarea No.	[1] Subarea Size	Max. Allowed No. of Stories	Max. Height Limit	Max. Allowed Footprint	[2]Max. Building Coverage
1	140,000	[3] 1	[3] 30	42,000	30%
2	56,000	1	18	16,800	30%
3	43,900	2	[4] 30	26,340	60%
4	104,900	2	[4] 30	62,940	60%
5	24,400	2	[4] 30	14,640	60%
6	62,600	1	24	25,040	40%
7	33,600	--	12	--	--
8	116,300	2	26	[5] 42,000	36%
9	29,250	1	24	11,700	40%
10	76,900	1	24	30,760	40%
11	61,100	2	[6] 24	24,440	40%
12	29,570	2	24	11,828	40%
13	20,600	1	15	8,240	40%
14	23,400	--	[7] 6	--	--
15	74,150	1	24	29,660	40%
16	13,400	[8] --	12	--	--
	910,070			**346,388**	

Notes:

[1] Subarea boundaries are approximate within 10 percent plus or minus; actual boundaries will be field verified when development is proposed

[2] Parking shall be allowed anywhere in the development zone provided it is consistent with all provisions of the CLRDP

[3] A small portion of the warehouse (i.e. up to 20% of footprint) may be two stories high and a max of 36 feet in height

[4] Height may extend to 36 feet to allow for ventilated lab space per IM 4.2.4

[5] Exclusive of square footage for carports

[6] Ocean Health II is allowed to be 36 feet in height

[7] The intention in this subarea is to allow new structures to be as tall but no taller than structures in the subarea that existed at the time of CLRDP adoption. Accordingly, the maximum allowed height may slightly exceed 6 feet.

[8] Parking and kiosk only are allowed in this subarea

[9] Above-grade development shall be concentrated to the south as much as possible

[10] Building development outside of subareas is prohibited. Development outside of subareas shall be limited to at-grade development (e.g., streets, parking areas, etc.) where any associated above-grade elements (e.g., fencing, light standards, etc.) shall not exceed the scale, including the heights, established for such elements in the CLRDP

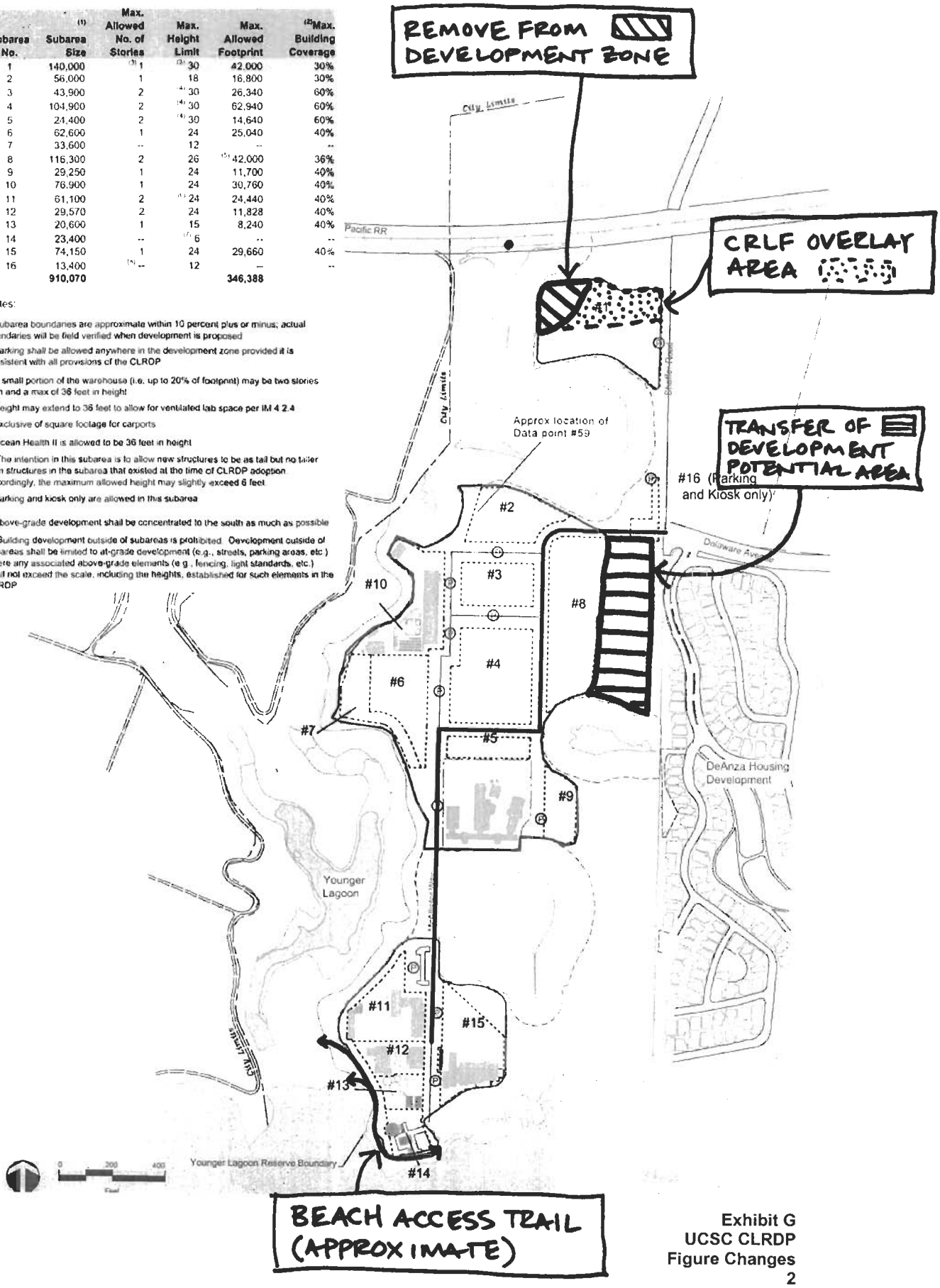

Exhibit G
UCSC CLRDP
Figure Changes
2

Exhibit H: Wetlands Delineation at Terrace Point

Memo to Charles Lester from John Dixon, Ecologist/Wetland Coordinator

CALIFORNIA COASTAL COMMISSION
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MEMORANDUM

FROM: John Dixon, Ph.D.
Ecologist / Wetland Coordinator

TO: Charles Lester

SUBJECT: Wetland Delineation at Terrace Point

DATE: March 28, 2006

Documents reviewed:

Habitat Restoration Group. November 2, 1993. Terrace Point specific plan. Preliminary wetland delineation and addendum. A report prepared for S. Strelow.

John Gilchrist & Associates. May 1997. Preliminary wetland delineation, Santa Cruz coastal marine research center at Terrace Point. A report prepared for ATC Realty Sixteen, Inc.

Huffman-Broadway Group. August 2001. Investigation of the presence of wetlands and other environmentally sensitive habitat areas on the Terrace Point site, University of California, Santa Cruz. A report prepared for Campus and Community Planning, University of California, Santa Cruz.

Huffman-Broadway Group. January 2004. Investigation of the presence and geographic extent of wetlands on Terrace Point and Younger Lagoon reserve, University of California, Santa Cruz. A report prepared for Campus and Community Planning, University of California, Santa Cruz.

R.R. Curry, Ph.D. (Watershed Systems). November 23, 2005. Letter to C. Lester (CCC) re: Huffman-Broadway Group wetland delineation at Terrace Point.

T. Huffman, Ph.D. (Huffman-Broadway Group). February 7, 2006. Letter to C. Lester (CCC) re: Response to R. Curry letter of November 23, 2005.

Prior to human disturbance, the habitat at Terrace Point was probably coastal terrace prairie. The soils are mollisols, which are characterisitic of prairie soils. In the context of wetland delineation, mollisols are designated "problem soils" because they have a dark coloration resulting from the high organic content that is typical of grasslands. This constitutes a problem for the wetland delineator because the primary field indicator of wetland soils is also a dark coloration, but in the case of wetlands the coloration results from the leaching of iron that occurs in waterlogged soils when they become anaerobic.

Since mollisols have a dark coloration (low chroma) in both uplands and wetlands that is unrelated to the presence or absence of anaerobic reducing conditions, soil coloration is not a useful field indicator of hydric soils at Terrace Point. There are other soil characteristics known as "redoximorphic" features that may also be indicative of wetland soils. For unknown reasons, these features are uncommon in most areas at Terrace Point, including those wetlands that are inundated for nearly the whole winter each year. As a result of these problems, hydric soil indicators are of little use at this location, so delineation must rely on hydrology and wetland indicator plants.

In most of coastal California, wetland vegetation is the most useful feature for establishing the boundaries of wetlands because it contrasts with the adjacent upland vegetation that is typically made up of difference species. However, at Terrace Point one of the most dominant species is the FAC[1] rye grass, *Lolium* sp. Along the central coast, *Lolium* commonly grows in both wet and dry habitats and, at Terrace Point, can be found growing both in areas that are under water for months at a time and in areas that appear never to be inundated or saturated except shortly after rainfall. A second species that is abundant at Terrace Point is the OBL species, false willow (*Baccharis douglasii*). In natural, unaltered habitats, more than 99% of the occurrences of this species are estimated to be in wetlands and, unlike rye grass, false willow is usually a useful wetland indicator, generally growing around the edges of marshes and streams. At Terrace Point, false willow colonized sometime after farming activities ceased (1987) and was scattered throughout most of the site[2] by at least 1993. However, its distribution does not appear to be correlated with soil moisture[3]. Since both rye grass and false willow grow in both wet and dry areas at Terrace Point, their distribution is not very useful in drawing wetland boundaries. There are those in the community who seem to believe that every area that has a preponderance of plants that are on the U.S. Fish and Wildlife Service's list of plants that occur in wetlands should be delineated as "wetlands," regardless of size, landscape position, soil characteristics, or hydrological status. In my opinion, this is a recipe for improperly categorizing uplands as wetlands. Some of the possible problems are addressed in the most recent delineation report (Huffman-Broadway Group 2004).

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[1] Wetland indicator plants are given designations based on the estimated frequency that they occur in wetlands: Obligate Wetland (OBL) – > 99% of occurrences in wetlands under natural conditions; Facultative Wetland (FACW) – 67-99% of occurrences in wetlands; Facultative (FAC) – 34-66% of occurrences in wetlands; Facultative Upland – 1-33% of occurrences in wetlands; Obligate Upland (UPL) - > 99% of occurrences in uplands under natural conditions within the region, but occurs in wetlands elsewhere (Reed, P.B. Jr. 1988. National list of plant species that occur in wetlands: California (Region 0). U.S. Fish and Wildlife Service Biological Report 88 (26.10). 135 p.).

[2] The reasons for the occurrence of false willow in uplands as well as in wet areas at Terrace Point are not understood. However, field observations have falsified the hypothesis that it is being supported by deep roots that reach ground water. I think it is most likely that false willow was able to colonize uplands shortly after the cessation of agriculture when there was little competition from other species and is now able to hold that space. Most wetland species do not require wet conditions but are able to tolerate saturated soil whereas their upland competitors cannot grow under such conditions. False willow does not appear to be colonizing new areas at Terrace Point.

[3] However, as judged by stem height and diameter, plants are more robust in wetter areas and are more robust where they grow in homogenous stands without competitors.

The Commission has routinely taken an appropriately conservative approach to wetland delineation by finding that plants on the Service's list of wetland indicator plants are presumptively growing as "hydrophytes,"[4] and that areas with a predominance[5] of such plants are presumptively "wetlands." However, this presumption can be rebutted by strong positive evidence[6] of upland conditions. The Commission always has the discretion to assess multiple factors and rely upon professional judgment, and I think such an approach is particularly appropriate in technically difficult situations, such as that at Terrace Point.

The first two wetland delineations (Habitat Restoration Group 1993; John Gilchrist Assoc. 1997) were both conducted by Ms. Mara Noelle, based on the wetland definition of the Army Corps of Engineers. In 1993, about 13 acres were delineated as wetlands. In 1997, only 4 acres were delineated using the same wetland definition and methods. Three factors appear to account for the difference. In 1993, an area of about 1.4 acres in the southeast portion of the site had no indications of hydrology and no wetland vegetation in the winter but following heavy rainfall in the spring the annual rabbit's foot grass (FACW+) sprouted and the area it dominated was added to the delineation. In 1997, that area showed no indication of wetland vegetation (other than the scattered clones of false willow that are still present) or hydrology and was mapped as uplands. South of the large pond near the National Marine Fisheries building a ditch was dug to drain water to the coastal bluff during the period of agriculture. This ditch had wetland characteristics in 1993, but by 1997 had largely filled in and no longer had wetland hydrology. Finally, in 1993 a very large area of wet meadow dominated by rye grass was delineated north of Delaware based largely on hydrology. However, by 1997 most of this area had been invaded by upland weeds and no longer showed evidence of wetland hydrology, perhaps because much of the remnant furrow structure from earlier plowing had broken down and filled in.

In 2001, Dr. Terry Huffman (Huffman-Broadway Group 2001) conducted a delineation based on the wetland definitions of the Coastal Act and Commission's regulations following the methods promulgated by the Army Corps of Engineers. The Coastal Commission considers a wetland to be any area that is wet enough long enough to support a predominance of hydrophytic vegetation *or* result in the development of hydric soils. However, because of the problem soils and prevalence of rye grass and false willow, Huffman could not reasonably base his delineation on the simple application of the field indicators of hydric soils and wetland indicator plants. Rather he considered

[4] A "hydrophyte is 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. Wetland indicator plants are typically adapted to grow in such conditions, but most are also capable of growing in dry upland soil.

[5] "Predominance" is a community concept that means that more than 50% of the dominant plant species present are wetland indicator species. Dominance is determined by various measures of relative abundance.

[6] As opposed to "negative evidence" - for example, the simple absence of field indicators of hydrology. By contrast, "positive evidence" of upland hydrology might be the observation that a given area saturates only ephemerally following significant rainfall, that the soil is very permeable with no confining layer, or that the land is steep and drains rapidly. Positive evidence of upland conditions is difficult to obtain during the dry season.

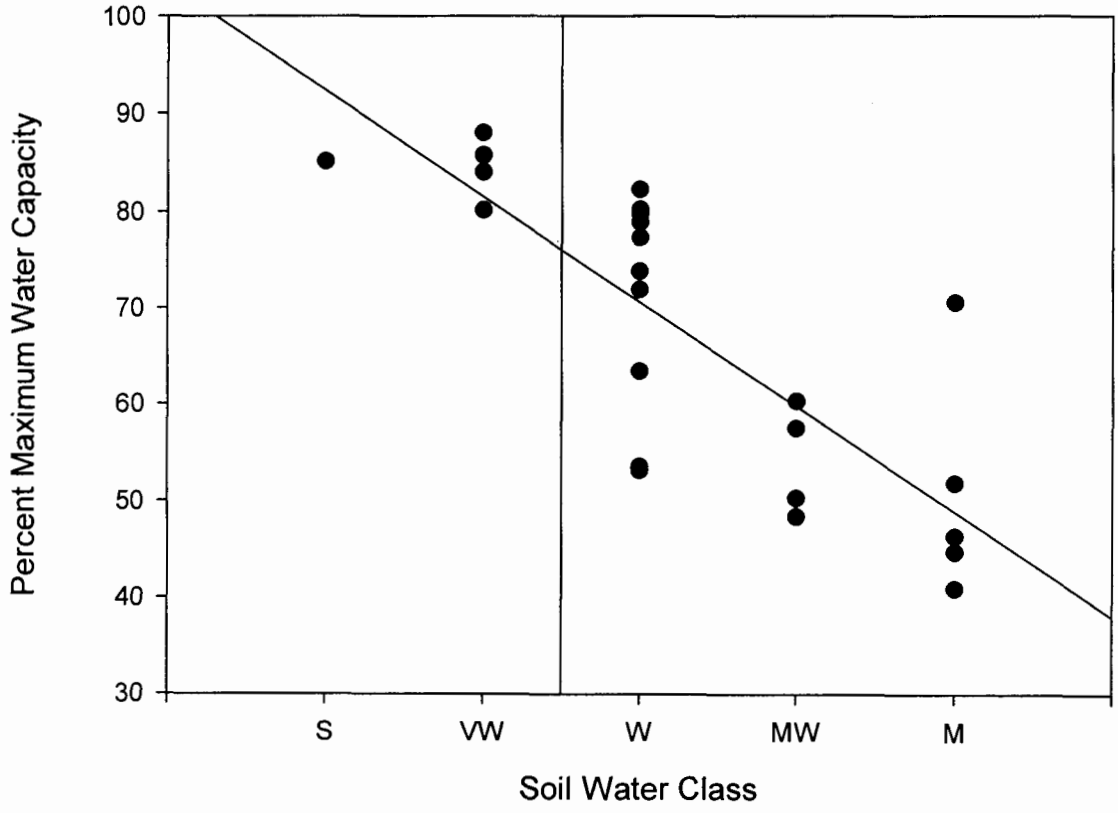
multiple factors, including soil characteristics, landscape position, and drainage patterns. However, in the final analysis his wetland boundaries were overwhelmingly based on evidence of inundation, such as sediment deposits and algal mats. This resulted in a delineation that, for the most part, would correspond to boundaries based on the 3-parameter (water, soils, vegetation) Corps' approach and, indeed, the boundaries were only slightly different from those drawn in 1997. Community organizations, including the Terrace Point Action Network and the Sierra Club, questioned the conclusions of the 2001 delineation and argued that additional wetland areas were present based on the distribution of false willow and on observations and photographs of ponding in some areas. In order to resolve these issues, additional field work was conducted during the rainy seasons of 2001-2002 and 2002-2003. A primary purpose of the new field work was to examine in some detail patterns of soil saturation in questionable areas and not base the delineation so strongly on evidence of inundation. This resulted in a considerably larger area being delineated in the wet meadow north of Delaware.

Soil saturation[7] is generally caused by either high ground water or a perched water table. The Corps considers the upper 12 inches of the soil to be the "major part of the root zone" for most plant species and, if the water table rises to within 12 inches of the surface, the soil is considered to be saturated in the major portion of the root zone since in most soils capillary action will saturate the soil above the water table. The Corps and the National Resource Conservation Service generally consider inundation for 7 days or more or saturation for 14 days or more to be evidence of wetland conditions. Where the root zone is saturated by a high water table, there is generally either continuous saturation throughout the soil column or a cline from moist to wet to saturated soil from the ground surface to deeper in the soil column. At Terrace Point, this pattern does not hold in many areas. Although there is an impermeable mudstone underlying the site, it is generally several feet below the surface, except in the central wetland near the NMFS building. In addition, many areas have clayey soils within 2 feet of the surface and some of these may be sufficiently impermeable to perch water. However, outside the areas of inundation, the soils do not appear to be saturated by a perched water table. Instead, rainwater slowly percolates through the soil producing a saturated band a few inches thick with unsaturated soil above and below. The Corps manual does not address itself to this unusual situation. Huffman examined soil saturation by using a soil auger to extract and characterize the soil column inch by inch. The soil texture was noted and its water content estimated. An objective moisture scale was developed with my participation based on the visual characteristics and apparent plasticity of the soil. The first year the scale was: Dry (feels dry), Moist (feels moist, but no surface sheen), Wet (water observable among soil particles as a surface sheen), Saturated (water runs from the soil when held). The second year a similar scale was used but, because field delineators felt a need to add "plus" and "minus" qualifiers to the categories, two additional categories were added: Dry (crumbly or solid), Moist (feels damp, malleable), Moist-Wet (predominantly moist but with wet patches), Wet (Obvious surface sheen, no

[7] Saturated soil is soil in which all easily drained voids (pores) between soil particles are temporarily or permanently filled with water.

water drains when held or gently squeezed), Very Wet (strong sheen to thin surface film; no water drains when held or gently squeezed, but liquefies when shaken), Saturated (soft mass, water drains when held or gently squeezed). Since we were not aware of established standards for judging soil saturation in the field, we decided to analyze soil samples in the laboratory to see if the measured water content of soils judged to be "saturated" was similar to the water content reported in the literature for saturated soils. To that end, we collected 24 vials of soil by pressing each vial into the side of a soil pit. We then dug out and classified in the field a second sample taken from about the same place. The vial of soil was taken to the laboratory weighed wet, weighed dry, and the weight and volume of the vial determined. From these measurements, the degree of saturation was calculated using standard methods. The results are shown in the following figure.

Relationship Between Soil Water Classification and Measured Water Content



There is a strong and highly significant correlation between the actual water content and our field classification (correlation coefficient r=0.79). There was no difference between the one "Saturated" sample and the "Very Wet" samples and both categories were considered to represent soil that was saturated with water for purposes of the

delineation (Huffman-Broadway Group 2004). Although about 60% of the observed variability in water content is explained by differences in field classification[8], there is considerable unexplained variability within each category. Much of this is probably due to the logistic necessity of collecting laboratory and field samples separately and likely reflects small-scale variability in water content within the soil column. Despite this source of error, there was relatively little overlap between the "Saturated" and "Very Wet" categories and the "Wet" and drier categories. In general, soil judged "Wet" or drier in the field was very obviously not saturated with water.

The data suggest that soils that were placed in the "Very Wet" and "Saturated" categories in the field contained between 80% and 90% of the maximum possible water volume based on the calculated soil porosity[9]. Research by Pilot and Patrick[10] suggests that soils must contain about 90% of the maximum water capacity to produce reducing conditions. Therefore, if anything, our determinations were conservative.

Dr. Curry (2005) has suggested that the delineation should have included a direct assessment of reducing conditions in the soil as estimated with a hand held redox meter. Using this non-standard delineation approach would not result in a delineation that was more conservative in the direction of resource protection. If anything, it would have the opposite affect. This is because soil saturation is a necessary, but not sufficient condition for reducing conditions. In other words, all soils that are saturated are not anaerobic. However, in Huffman's delineation observed soil saturation that was judged to last 7 days was considered sufficient evidence of wetland conditions.

The use of the field determinations of water content was also conservative. Soils were judged saturated if the band of saturation was at least 6 inches wide within the upper 12 inches of the soil. If saturation in the major portion of the root zone was judged to have persisted for at least 7 days, this was considered evidence of wetland conditions. The Corps and NRCS requires evidence of saturation within the major portion of the root zone for at least 14 days for it to be taken as evidence of hydric conditions.

On the other hand, some of the data analysis was not conservative in the direction of resource protection. Because rainfall was unusually high during both December 2001 and December 2002, Huffman elected to ignore data collected prior to January 30, 2002 and did not begin to collect data in 2003 until January 31 in an effort to assess "normal" conditions. The affects of this decision during Phase III (2002-2003 rain season) cannot be assessed. However, data were taken but not analyzed during the previous year (Phase II). Nine data points were potentially affected (points 1, 2, 4, 5, 6, 9, 15, 40, 55) since there was evidence of soil saturation on one or more survey dates prior to the end of January. Nearly all of these locations were very near a delineated wetland boundary and would be contained within the buffer zone. Only one point (15) was in an area

[8] As indicated by $r^2 = 0.63$.

[9] Some soils estimated in the field to be "saturated" may have had higher water contents since they were poorly represented in the laboratory analysis.

[10] Pilot, L. and W.H. Patrick, Jr. 1972. Nitrate reduction in soils: effect of soil moisture tension. Soil Science 114:312-316.

likely to be affected by development (the proposed maintenance area), but it was dominated by rye grass and did not have more than 50% wetland indicator plants, suggesting upland conditions. I conclude that the decision not to analyze the earlier data probably had little practical affect on the on the ultimate determination of wetland locations and boundaries.

There was one location (data point 59) in the northwest portion of the field south of Delaware where the data were ambiguous and Huffman did not delineate a wetland. I initially agreed, but upon further reflection decided that in the face of significant uncertainty the area should be delineated. With this addition, I believe that the 2004 wetland delineation is accurate and conservative.

Exhibit I: Ex Parte Communications

FORM FOR DISCLOSURE OF EX PARTE COMMUNICATION

Date and time of communication: Mon, Feb. 6, 2006, 2:30 PM
(For messages sent to a Commissioner by mail or facsimile or received as a telephone or other message, date time of receipt should be indicated.)

Location of communication: Chula Vista
(For communications sent by mail or facsimile, or received as a telephone or other message, indicate the means of transmission.)

Person(s) initiating communication: Steve Davenport (UCSC), Nancy Lucast

Person(s) receiving communication: Steve Padilla, Allison Rolfe

Name or description of project: UCSC LRDP (Feb.10, 2006, Fri., 5.b.)

Detailed substantive description of content of communication:
(If communication included written material, attach a copy of the complete text of the written material.)

UCSC representatives described the overall existing conditions and mission of the Marine Campus. They indicated they have been working closely with staff for some time and are continuing to do so. It appears some issues may yet be unresolved: (1) wildlife protection measures on the terrace; (2) conflict between Younger Lagoon Reserve ESHA and beach access; (3); Parking adequacy and management; and (4) above and beyond these issues, technical problems with staff's proposed findings (a University-wide concern). Meetings are continuing with staff to try to work these out. They expect to be proposing some alternative sugg mods and findings at the CCC hrg for those outstanding issues that remain after this week's meetings with CCC staff.

8 Feb 2006
Date

Signature of Commissioner

If the communication was provided at the same time to staff as it was provided to a Commissioner, the communication is not ex parte and this form does not need to be filled out.

If communication occurred seven or more days in advance of the Commission hearing on the item that was the subject of the communication, complete this form and transmit it to the Executive Director within seven days of the communication. If it is reasonable to believe that the completed form will not arrive by U.S. mail at the Commission's main office prior to the commencement of the meeting, other means of delivery should be used, such as facsimile, overnight mail, or personal delivery by the Commissioner to the Executive Director at the meeting prior to the time that the hearing on the matter commences.

If communication occurred within seven days of the hearing, complete this form, provide the information orally on the record of the proceeding and provide the Executive Director with a copy of any written material that was part of the communication.

Received at Commission Meeting

FEB - 8 2006

Fri., 5.b.

From:_____

FORM FOR DISCLOSURE OF EX PARTE COMMUNICATION

Date and time of communication: Fri, Feb. 3, 2006, noon

(For messages sent to a Commissioner by mail or facsimile or received as a telephone or other message, date time of receipt should be indicated.)

Location of communication: Santa Rosa

(For communications sent by mail or facsimile, or received as a telephone or other message, indicate the means of transmission.)

Person(s) initiating communication: Mary Hudson, Steve Davenport (UCSC)

Person(s) receiving communication: Mike Reilly

Name or description of project: UCSC LRDP (Feb.10, 2006, Fri., 5.b.)

Detailed substantive description of content of communication:

(If communication included written material, attach a copy of the complete text of the written material.)

UCSC representatives indicated they have been working closely with staff for some time and are continuing to do so. It appears some issues may be unresolved: (1) wildlife protection measures on the terrace; (2) conflict between Younger Lagoon Reserve ESHA and beach access; (3); Parking adequacy and management; and (4) above and beyond these issues, technical problems with staff's proposed findings (a University-wide concern). Meetings are continuing with staff to try to work these out.

Feb 6, 2006 Mike Reilly

FORM FOR DISCLOSURE OF EX PARTE COMMUNICATION

RECEIVED
MAR 0 3 2006
CALIFORNIA
COASTAL COMMISSION
CENTRAL COAST AREA

RECEIVED
FEB - 8 2006
CALIFORNIA
COASTAL COMMISSION

Date and time of communication: Tues, Feb. 7, 2006, 9:30 PM
(For messages sent to a Commissioner by mail or facsimile or received as a telephone or other message, date time of receipt should be indicated.)

Location of communication: San Diego
(For communications sent by mail or facsimile, or received as a telephone or other message, indicate the means of transmission.)

Person(s) initiating communication: Steve Davenport (UCSC), Nancy Lucast

Person(s) receiving communication: Dave Potter

Name or description of project: UCSC LRDP (Feb.10, 2006, Fri., 5.b.)

Detailed substantive description of content of communication:
(If communication included written material, attach a copy of the complete text of the written material.)

UCSC representatives recalled our earlier site visit some months ago (on file) including a brief description of the overall existing conditions and mission of the Marine Campus. They indicated they have been continuing to work closely with staff. It appears some issues may yet be unresolved: (1) wildlife protection measures on the terrace; (2) conflict between natural resource protection for Younger Lagoon Reserve ESHA and beach access; (3); parking adequacy and management (including metered public parking such as permitted at UCSB); (4) height of rooftop equipment (UCSC needs 1 ft. above staff's limit for specialized marine tank/plumbing eqt.), and (5) above and beyond these issues, technical problems with staff's proposed findings (a University-wide concern). Meetings are continuing with staff to try to work these out. They expect to be proposing alternative findings regarding (5), above, and some alternative sugg mods at the CCC hrg for those outstanding issues that may remain after this week's meetings with CCC staff.

2/7/05
Date

D Potter
Signature of Commissioner

If the communication was provided at the same time to staff as it was provided to a Commissioner, the communication is not ex parte and this form does not need to be filled out.

If communication occurred seven or more days in advance of the Commission hearing on the item that was the subject of the communication, complete this form and transmit it to the Executive Director within seven days of the communication. If it is reasonable to believe that the completed form will not arrive by U.S. mail at the Commission's main office prior to the commencement of the meeting, other means of delivery should be used, such as facsimile, overnight mail, or personal delivery by the Commissioner to the Executive Director at the meeting prior to the time that the hearing on the matter commences.

If communication occurred within seven days of the hearing, complete this form, provide the information orally on the record of the proceeding and provide the Executive Director with a copy of any written material that was part of the communication.