

**UNIVERSITY OF CALIFORNIA SANTA CRUZ, MARINE SCIENCE CAMPUS COASTAL LONG  
RANGE DEVELOPMENT PLAN**

**2012 ANNUAL REPORT**

**March 2013**

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## **1 Introduction**

Pursuant to Section 8.8 of the Coastal Long Range Development Plan (CLRDP), this annual CLRDP report includes a cumulative and calendar-year summary of the compliance of development projects authorized under the CLRDP with the terms and conditions of their authorizations; a description of development excluded from the development review procedures in Sections 8.1.4, 8.2 and 8.4 of the CLRDP by virtue of Section 8.3; authorizations for emergency development pursuant to Section 8.10; enforcement of the provisions of the CLRDP pursuant to Section 8.9; annual monitoring reports required under the CLRDP; the status of CLRDP-required improvements and other University commitments; and any comments received on CLRDP implementation.

A record of the CLRDP annual report is maintained in the offices of UCSC Physical Planning & Construction and is available for public review by appointment. A copy of the annual report will be submitted to the Executive Director of the California Coastal Commission.

## **2 Project Compliance**

This section summarizes the compliance of development projects that were authorized under the CLRDP in 2012 with the terms and conditions of their authorization, and of continuing obligations from authorizations in previous years.

NOID 5 (12-2), Public Coastal Access Overlooks. Authorized on August 10, 2012. The Coastal Commission determined that the proposed development is consistent with the CLRDP, with no conditions. Project construction began in October 2012 and is expected to be completed by March 2013. The project includes a mitigation monitoring and reporting program that was adopted by the University in conjunction with project approval in January 2011. A copy of the mitigation monitoring checklist is included in Appendix C.

In 2012, the Campus continued to comply with continuing obligations from two projects that were authorized in 2010:

NOID 10-1, Public Access to and within the Younger Lagoon Reserve. Authorized on March 12, 2010. The Coastal Commission determined that the proposed development project is consistent with the CLRDP, with no conditions. The project is being implemented on an ongoing basis. NOID 10-1 requires that the public have access to Younger Lagoon Reserve beach through controlled visits, and that a monitoring program be created and implemented to document effect on native flora and fauna within Younger Lagoon and its beach. A report of activities carried out under NOID 10-1 in 2012, including results of the monitoring program, is included in Appendix B.

NOID 10-2, Younger Lagoon Reserve Terrace Lands Phase 1A Restoration. Authorized on September 15, 2010. The Coastal Commission determined that the proposed development project is consistent with the CLRDP, with no conditions. The project is being implemented over a seven-year period. Activities carried out in 2012 under NOID 10-2 are described in Section 7.2, below.

## **3 Development Excluded from Development Review Procedures**

This section describes development undertaken in 2012 that is excluded from the development review procedures in CLRDP sections 8.1.4, 8.2., and 8.4 by virtue of Section 8.3. In 2012, the University carried out a variety of repair and maintenance activities, including patching and repairing of the dolphin pool lining and replacing the roof of Trailer 2. These projects did not result in an addition to, or enlargement or expansion of the facilities.

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## 4 Emergency Authorizations

This section describes development undertaken in 2012 pursuant to emergency authorizations by the UCSC Chancellor or the California Coastal Commission pursuant to CLRDP Section 8.10. No emergency authorizations were approved in 2012.

## 5 Enforcement

This section describes actions taken to enforce the provisions of the CLRDP and the Coastal Act which are enforceable pursuant to Chapter 9 of California Public Resources Code Division 20. No enforcement actions were taken in 2012.

## 6 CLRDP-Required Annual Monitoring Reports

The CLRDP requires the following annual monitoring reports:

- **Water Quality Report.** The annual water quality report is to be prepared following each storm season (typically post-April 15th) and the report completed by mid-summer. The annual water quality report for the 2011-12 storm season is presented in Appendix A of this document.
- **Resource Management Plan Reporting.** The Resource Management Plan (CLRDP Appendix A) requires the submission of annual reports of the results of monitoring activities provided for in the Specific Resource Plan (SRP) that will be prepared for each phase of habitat restoration. The second annual report, which covers monitoring activities carried out in FY2011-12, is presented in Appendix B of this document.

## 7 Status of University Commitments

This section summarizes the status of the capital improvements identified in CLRDP Chapter 9 and in other sections of the CLRDP, including measures to protect and enhance habitat, public access policies and procedures, and transportation demand management.

### 7.1 Capital Improvement Program

As a result of the unanticipated and unprecedented decline in revenue, and associated reductions in funding and staff time, over the past four years, the Campus has not been able to meet all of the schedule requirements of the CLRDP Capital Improvement Program. In March 2012, to comply with CLRDP Policy 1.2, which contains a provision that allows for relief of CLRDP requirements, the Campus notified Commission staff of the manner in which the University proposes to remedy the defaults and proposed a schedule for monitoring and reporting progress on correcting the deficiency. That schedule was discussed and agreed to with Commission staff. Table 1 summarizes the status of the capital improvements identified in CLRDP Chapter 9, including the revised schedule proposed by the Campus.

**Table 1**  
**Status of Capital Improvements Required by the CLRDP**

Category	Improvement	Status
<i>Public access improvements</i>	Trails	
		<i>Group 1</i> Not triggered. No action taken in 2012.
		<i>Group 2</i> Not triggered. No action taken in 2012.
		<i>Group 3</i> Not triggered. No action taken in 2012.
	Overlooks	

Category	Improvement	Status
	<i>Overlook A</i>	Included in NOID 5 (12-2). Construction began in October 2012, with completion expected in March 2013.
	<i>Overlook B</i>	Completed in 2010, under NOID 09-1.
	<i>Overlook C</i>	Included in NOID 5 (12-2). Construction began in October 2012, with completion expected in March 2013.
	<i>Overlook D</i>	Included in NOID 5 (12-2). Construction began in October 2012, with completion expected in March 2013.
	<i>Overlook E</i>	Included in NOID 5 (12-2). Construction began in October 2012, with completion expected in March 2013.
	<i>Overlook F</i>	Included in NOID 5 (12-2). Construction began in October 2012, with completion expected in March 2013.
	Parking	
	<i>Lower terrace public coastal access</i>	Campus submitted a NOID to the Commission in March 2012. Based on subsequent discussions with Commission staff, this project is now included in NOID 6 (13-1). (A draft NOID was submitted to the Commission in January 2013.)
	<i>Lower terrace dual use</i>	Campus submitted a NOID to the Commission in March 2012. Based on subsequent discussions with Commission staff, Campus has included this in NOID 6 (13-1). (A draft NOID was submitted to the Commission in January 2013.)
	<i>Middle terrace public coastal access</i>	Not triggered. No action taken in 2012.
	<i>Campus Entrance</i>	Not triggered. No action taken in 2012.
	<i>Updated signs and information-public access</i>	New signs were installed in 2011 as part of the Outdoor

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<b>Category</b>	<b>Improvement</b>	<b>Status</b>
	<i>parking</i>	Research Yard Expansion and Public Access Improvements Project (NOID-09-1). Additional signs will be installed in conjunction with the designation of lower terrace public coastal access parking spaces.
	<i>Parking program</i>	Campus submitted a NOID to the Commission in March 2012. Based on subsequent discussions with Commission staff, Campus is including this project in NOID 6 (13-1). (A draft NOID was submitted to the Commission in January 2013.)
	<i>Identification of Access Facilities</i>	(CLRDP section 9.1.4) Informational signs are scattered throughout the site at public visitor destinations, showing public access trail map. Brochures about research activities, educational opportunities, planned events, and participation opportunities are available at the Seymour Center entry area, the Seymour Center administrative office, and at the Long Marine Lab main administrative office.
<b><i>Habitat enhancements</i></b>	Natural areas restoration	See Section 7.2, below.
	Remove/restore parking area west of McAllister Way	The Campus plans to construct this improvement under NOID 6 (13-1).
<b><i>Circulation Improvements</i></b>	Shaffer Rd. Improvements	Not triggered. No action taken in 2012.
	Realigned Main Campus Street	Not triggered. No action taken in 2012.
	Shaffer/Delaware Intersection	Not triggered. No action taken in 2012.
<b><i>Drainage System Improvements</i></b>	De Anza Mobile Home Park drainage pipe	Based on an evaluation by a civil engineer, the Campus has determined that the drainage pipe from wetland W4 functions adequately and that this pipe

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Category	Improvement	Status
		does not need to be replaced.
	Outfall west of NOAA Outfall west of NOAA	The Campus plans to construct this improvement under NOID 6 (13-1). (A draft NOID was submitted to the Commission in January 2013.)
	Middle terrace percolation trench and berm	The Campus plans to construct this improvement under NOID 6 (13-1). (A draft NOID was submitted to the Commission in January 2013.)

### **7.2 Habitat Enhancement and Protection**

On July 24, 2008 the University of California Natural Reserve System (UCNRS) and UCSC Campus Administration signed an agreement incorporating the approximately 47 ac (19 ha) of natural areas outside of the development zones on the Marine Science Campus into the University of California Natural Reserve System (UCNRS) as part of the Younger Lagoon Reserve (YLR). The agreement outlines the commitment by the NRS and campus to comply with restoration, management, and research on all YLR lands.

The Chancellor of UCSC appointed a Scientific Advisory Committee (SAC) to guide the creation of a Specific Resource Plan (SRP) on January 30, 2009. During 2009, Reserve staff drafted an SRP for Phase 1 of the restoration and management of the Terrace Lands, in consultation with the SAC and other technical professionals. The Campus submitted a NOID for the SRP Phase 1A, which was authorized by the Coastal Commission in September 2010.

Restoration activities that were initiated on the Younger Lagoon Reserve Terrace Lands in 2009 continued in 2012. This work was performed largely by undergraduate students and community volunteers. Reserve staff conducted weed patrols of the entire terrace, continued removing ice plant from the coastal bluffs, removed all Jubata grass and French Broom re-sprouts from the terrace, and removed all Cape Ivy re-sprouts from the west arm of the lagoon. In the summer and fall of 2012, reserve staff collected seeds for restoration growing. These seeds were propagated at the UCSC Teaching Greenhouse in the fall and winter of 2012. With the assistance of hundreds of volunteers and student interns, Reserve staff continued to plant native seedlings in areas along the beach cliff formerly covered with ice plant and upland areas adjacent to the beach cliffs. Vegetation surveys for restoration compliance monitoring of planted areas on the Terrace Lands were conducted in the spring of 2012. The YLR annual report for FY2011-12 is included in this report as Appendix B.

### **7.3 Public Access Policies and Procedures**

Consistent with the provisions of the CLRDP, the Marine Science Campus is open to the public during daylight hours. Access to the Marine Science Campus is free except that a fee is charged for admission to the Seymour Marine Discovery Center. The Center has announced six community free days for 2013. Organized tours offer controlled access to some research areas, research buildings, and parts of the lagoon portion of the Younger Lagoon Reserve; these areas are otherwise not open to the public. All parking on the campus during 2012 was free and on a first-come-first-serve basis. The Seymour Center is open seven days a week during July and August and six days a week during the rest of the year.

Supervised site tours of parts of Long Marine Lab, as well as the Seymour Center exhibit halls and outdoor areas are offered three times a day when the Seymour Center is open. Tours of marine

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mammal research areas are offered twice a month. The Seymour Center also offers a variety of field trips for K-12 school classes and community college groups, including hands-on lab activities.

Since 2010, the Reserve has offered 90-minute tours of the original Younger Lagoon Reserve twice a month. Access to other part of the Younger Lagoon Reserve, on the terrace lands, is not controlled at this time.

#### **7.4 Transportation Demand Management**

Santa Cruz Metropolitan Transit District (SMTD) UC Westside Route 20 bus provides hourly service to Delaware Avenue and Natural Bridges Drive weekdays from 7:30 a.m. until 8:30 p.m., and weekends from 8:30 a.m. until 8:30 p.m.. Supplemental bus service is provided on weekdays during the UCSC school term to handle overload on this route. SMTD route 3 also serves the MSC with hourly service 7:10 p.m. to 6:10 p.m. to the west end of Delaware Avenue, adjacent to the campus entrance.

Through an agreement between the University and the SCMTD, students who display a valid UCSC ID card do not have to pay a fare to ride SCMTD buses. SCMTD service for students is funded through the Student Transit Fee. Faculty and staff may obtain a SCMTD bus pass for \$8.75 per month, or \$105 annually, which provides UCSC's Transportation and Parking Services (TAPS) with funding for payments to the SCMTD to accommodate faculty and staff transit ridership.

The Campus' Long Marine Lab Shuttle was discontinued in Fall 2009, as ridership levels continued to decline for the third year in a row. With a total ridership for 2008-09 of only 741 passengers, the cost of the shuttle was more than \$56 per ride, and the shuttle was determined not to be a cost effective means of reducing trips to the campus.

TAPS coordinates a vanpool program that is open to faculty, staff and students. Zimride, a Facebook-based application, provides ride matching (on a regular or occasional basis) to members of the UCSC community. TAPS also has several programs to support the use of bicycles as a means of transportation: classes on bicycle safety, free bicycle licensing, a no-interest bike loan program, an emergency-ride-home program, and bicycle maintenance and repair clinics on the main campus.

TAPS' website provides detailed information about all of the Campus' alternative transportation programs and links to the SCMTD website.

#### **7.5 Removal of Existing Non-Conforming Facilities**

The temporary small-scale desalinization research facility in Subarea #13 was converted into a fenced outdoor research yard under NOID 09-1, in 2010. The Campus plans to remove the existing non-conforming greenhouses and ground-level storage area in Subareas #6 and #7 under NOID 6 (13-1), which was submitted to the Coastal Commission in January 2013.

#### **7.6 CLRDP EIR Mitigation Monitoring Program**

The CLRDP EIR Annual Mitigation Monitoring Report is presented in Appendix C.

### **8 Comments Received on CLRDP Implementation**

No comments on implementation of the CLRDP were received in 2012.

### **9 Appendices**

Appendix A: Annual Water Quality Report

Appendix B: Younger Lagoon Reserve Annual Report

Appendix C: Annual Mitigation Monitoring Report

Appendix A

Annual Water Quality Report

# UC SANTA CRUZ, COASTAL LONG RANGE DEVELOPMENT PLAN

## 2012 ANNUAL WATER QUALITY REPORT

March 2013

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### 1 Introduction

As specified in Section B.6.3 of the UC Santa Cruz Coastal Long Range Development Plan (CLRDP), this annual water quality report includes: 1) the results of the Drainage Monitoring and Maintenance Program described in Fig. B.22 of the CLRDP; 2) the results of any water quality monitoring requirements emanating from individual development projects; 3) any monitoring or other related information applicable to other Campus discharges (such as NPDES requirements associated with seawater discharges); 4) recommendations for any modifications to Campus drainage system components that are necessary to achieve CLRDP water quality performance standards.

The annual water quality report is prepared following each storm season (typically post-April 15th) and the report completed by mid-summer to allow any necessary changes to be implemented prior to the next storm season (i.e., by October 15th). Annual water quality reports are maintained in the offices of UC Santa Cruz Physical Planning and Construction, and are available for public review and shall be made readily available to researchers investigating the performance of water quality “best management practices” (BMPs).

### 2 Drainage Monitoring and Maintenance Program

This section summarizes the results of the Drainage Monitoring and Maintenance Program, including the assessment of source control BMP efficacy and the required monitoring and maintenance for treatment BMPs. The Drainage Monitoring and Maintenance Program includes monitoring and maintenance requirements for source control BMPs and treatment BMPs.

#### 2.1.1 Source Control BMPs

Table 1 summarizes the results of the Campus’ annual assessment of source control BMPs, as specified in Section B.6.1 of the CLRDP.

**Table 1**

#### **Annual Assessment of Source Control BMPs**

Minimum Performance Standard	Status
That the Campus is providing adequate and convenient means for the recycling/disposal of commercial and household hazardous wastes. The performance standard to be achieved is that all commercial and household hazardous wastes that can be recycled are being recycled, and that all such wastes that cannot be recycled are being properly disposed of.	Currently, the caretaker’s residence is the only residence on the Marine Science Campus. All campus employees who handle hazardous waste are required to receive hazardous waste training and to follow the hazardous waste handling procedures established by UCSC Environmental Health and Safety (EH&S). EH&C collects all hazardous wastes generated on the campus for proper disposal. EH&S maintains online recycling and disposal guidelines that help members of the campus community identify which materials can be

UCSC CLRDP, 2012 Annual Water Quality Report

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Minimum Performance Standard	Status
	recycled and which must be disposed of as hazardous waste. A recycling bin for used batteries is kept in the Center for Ocean Health mail room.
That less toxic alternatives to commercial and household hazardous chemicals (such as lubricants, pesticides, solvents, acids, alkalis and paints) are being used where possible, and that all such chemicals are appropriately stored and sparingly used. The performance standard to be achieved is that all commercial and household hazardous chemicals are stored in a manner designed to contain all spills, that information on less-toxic alternatives has been provided to potential Campus users, and that chemicals are used sparingly, per their intended application, and in a manner designed to minimize the potential for such chemicals to be applied outside target application areas.	Updates and educational outreach regarding the evolving universal waste programs are provided during laboratory safety meetings and waste generator training classes. Hazardous waste training is offered online and in the classroom. Training topics include the UCSC Waste Management website, where training participants learn how to navigate the site, find and use the fact sheets and the waste minimization webpage, hazardous waste determination and classification guidelines, the online hazardous waste tracking system, a new recycling and disposal guide, and a link to the Green Alternatives Wizard, a database that provides information on alternatives to hazardous chemicals or processes.
That all roads, parking lots, and other paved surfaces are being vacuum swept with a regenerative-air sweeper designed to control litter, dust, dirt, and other potential pollutants to the maximum extent feasible. The performance standard to be achieved is that all paved surfaces are vacuum swept at least one time per month and that all regenerative-air sweepers used are maintained in good working order per the manufacture's recommendations.	During the 2011-12 storm season, the roads, parking lots and paved surfaces were cleaned with a mechanical street sweeper. A regenerative air type sweeper has not been available for maintenance operations. Not all areas were swept on a monthly basis. Sweeping schedules have been updated and street sweeping frequency will be increased as resources allow.
That all landscaping uses native plants with low nutrient, water, and pesticide/rodenticide requirements. The performance standard to be achieved is that all Campus landscaping meets this criterion.	Landscaping was installed in conjunction with the improvements to Overlook B, which were implemented in 2010 under NOID 09-1. Areas disturbed for construction of the improvements to overlooks A, C, D, and E (NOID 5 [12-2]) will be re-vegetated. As documented in the NOID project reports, the plantings for both projects consist of native, low-water-use plants.
That the University is providing Marine Science Campus users with convenient recycling and yard waste programs, and that Campus users are fully utilizing the University's recycling and yard waste programs. The performance standard to be achieved is that 100 percent of recyclable materials are recycled and that 100 percent of yard wastes are mulched/reused.	Mixed recycling containers are staged at the Center for Ocean Health, Seymour Marine Discovery Center, the Boat Yard, the green house area and at the California Fish & Game Facility for oiled wildlife. All of these facilities also have centralized indoor office paper recycling centers, generally in the copy rooms. Two cardboard dumpsters service the same group of facilities. Additionally, yard waste is put into cubic yard carts that are emptied into a large debris box that is green-wasted at the

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Minimum Performance Standard	Status
	City Recycle Center. Finally, Physical Plant provides a separate debris box for all Natural Reserve and Site Stewardship 'yard waste'.

**2.1.2 Treatment BMPs**

No treatment BMPs have been installed since the CLRDP was approved.

**3 Project Water Quality Monitoring**

This section describes the results of any individual water quality monitoring requirements emanating from individual development projects. There were no water quality monitoring requirements emanating from individual development projects in 2012.

**4 Monitoring Applicable to Other Campus Discharges**

This section describes monitoring or other related information applicable to other Campus discharges (such as NPDES requirements associated with seawater discharges). Discharges of seawater from the Campus are subject to the monitoring requirements of the General Permit for Discharges from Aquaculture and Aquariums (NPDES Permit No. CAG993003). A copy of the 2012 Annual Report and Fourth Quarter Monitoring Report is attached. For all four monitoring periods of 2012 the Long Marine Lab discharge was in full compliance in all aspects of the permit.

**5 Recommendations**

This section presents recommendations for any modifications to Campus drainage system components that are necessary to achieve CLRDP water quality performance standards. No new development projects were completed in 2012, and no drainage system components have been constructed under the CLRDP.

**Attachment:** Long Marine Laboratory Annual Report 2012, NPDES General Permit No.CAG993003, and Monitoring and Reporting Program No. R3-2008-0059.



JOSEPH M. LONG MARINE LABORATORY  
INSTITUTE OF MARINE SCIENCES  
UNIVERSITY OF CALIFORNIA, SANTA CRUZ  
100 SHAFFER RD. | SANTA CRUZ, CALIFORNIA 95060  
831/459-2883 | 831/459-3383 FAX

January 27, 2013

Roger Briggs, Executive Officer  
California Regional Water Quality Control Board  
Central Coast Region  
895 Aerovista Place, Suite 101  
San Luis Obispo, CA 93401

Long Marine Laboratory  
Annual Report 2012 &  
Fourth Quarter Monitoring Report

Dear Mr. Briggs:

Please accept this letter and attachments in satisfaction of our Annual Report requirement for 2012 and Monitoring Report for the fourth quarter 2012 in accordance with the requirements of our General Permit No. CAG993003, and Monitoring and Reporting Program No. R3-2008-0059. Included is a one-page tabular summary of the sample analysis results by constituent for the individual quarters of the year. Also included is a one-page summary of results and observations for the fourth quarter, along with the quantitative chemical analysis report from Soil Control Lab, an analytical laboratory approved by the State of California. Should you need to see our field notes from the sampling and observations or the chain-of-custody document for the samples taken for analysis, please let me know--I will retain that detailed background information in files at Long Marine Laboratory.

The following statements are intended to satisfy specific requirements of our permit for annual reporting:

1) For 2011 the Long Marine Lab chemical analysis of the sampled discharge indicated full compliance with the permit. No corrective actions are indicated. 2) The name of the laboratory that we used to analyze discharge samples is: Soil Control Lab, a division of Control Laboratories Inc., 42 Hangar Way, Watsonville, California 95076.

Respectfully submitted,

Stephen L. Davenport  
Assistant Director

Cc: Paul Koch, Dean  
UCSC Physical and Biological Sciences

Steve Lindley, Director  
Santa Cruz Laboratory  
NOAA Fisheries

Laird Henkel, Director  
Marine Wildlife Center  
Calif. Dept. Fish and Game

Fourth Quarter, 2012  
Sample Date: January 22, 2013

California Regional Water Quality Control Board  
Central Coast Region  
Attn: Monitoring and Reporting Review Section  
895 Aerovista Place, Suite 101  
San Luis Obispo, CA 93401

Dear Mr. Briggs:

**Facility Name:** Long Marine Laboratory  
University of California Santa Cruz

**Address:** 100 Shaffer Road  
Santa Cruz, CA 95060

**Contact Person:** Steve Davenport  
**Job Title:** Assistant Director  
**Phone Number:** (831) 459-4771

**WDR/NPDES Order Number:** Gen Permit No. CAG993003, Order No. R3-2008-0059

**Types of Report** (circle all):      Monthly      Quarterly      Semi-Annual      Annual

**Month(s)** (circle applicable months\*):  
JAN    FEB    MAR    APR    MAY    JUN  
JUL    AUG    SEP    OCT    NOV    DEC

\*Annual Reports (circle the first month of the reporting period)

**Year:** 2012

**Violation(s)** (Place an X by the appropriate choice):      X  
\_\_\_\_\_ **No** (there are no violations to report)      \_\_\_\_\_ **Yes**

*If Yes is marked (complete a-g):*

**a) Parameter(s) in Violation:**  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

**b) Section(s) of WDR/NPDES Violated:**  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

**c) Reported Value(s)**

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**d) WDR/NPDES**

**Limit/Condition:**

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**e) Dates of Violation(s)**

(reference page of report/data sheet):

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**f) Explanation of Cause(s):**

(attach additional information as needed)

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**g) Corrective Action(s):**

(attach additional information as needed)

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In accordance with the Standard Provisions and Reporting Requirements, I certify under penalty of law that this document and all attachments were prepared under my direction or supervision following a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my knowledge of the person(s) who manage the system, or those directly responsible for data gathering, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment.

If you have any questions or require additional information, please contact me at the number provided above.

Sincerely,



Signature

Printed Name      David Belanger

Title                      Acting Dean, Division of  
Physical and Biological  
Sciences  
UC Santa Cruz

**LONG MARINE LABORATORY  
QUARTERLY DISCHARGE REPORT**

Sample Date: January 22, 2013

**Influent Monitoring/Analysis**

Total Suspended Solids (mg/L)	1.9
pH (pH Units)	8.0
Turbidity (NTU)	1.3
Temperature (degrees C)	11.9

**Effluent Monitoring/Analysis**

Estimated Outflow (MGD)	0.9
Settleable Solids (mL/L)	ND
Total Suspended Solids (mg/L)	ND
Turbidity (NTU)	0.77
pH (pH Units)	8.0
Temperature (degrees C)	12.5
Grease & Oil (mg/L)	ND

**Receiving Water Observations**

	Station RSW-1 100' upcoast	Station RSW-2 100' downcoast
Floating or suspended matter	absent	absent
Discoloration	absent	absent
Visible films, sheens, coatings	absent	absent
Fungi, slimes, objectionable growths	absent	absent
Potential nuisance conditions	absent	absent

Receiving water was observed from the blufftop directly over the point of discharge

Receiving water appearance: Clear, some sand from swell

Weather, Wind, Wave Conditions: Wind E 5 kts, glassy, Swell SW 3-4'

**Chemical Usage**

Hypochlorite solution in the form of household bleach is used for routine pool and tank cleaning on a weekly basis, and hypochlorite solution generated by electrolysis from seawater is added to recirculating seawater in marine mammal pools to maintain a maximum residual of 0.5 ppm on a continuous basis. In either case, as this chlorinated water is added to the discharge stream it is diluted significantly with non-chlorinated seawater effluent, and de-chlorinated with liquid sodium bisulfite solution when necessary to meet limits at the point of discharge to the ocean.

We certify that we have not added substances to the waste stream that are listed in Table B of the California Ocean Plan or 40 CFR Section 131.38 with the exception of residual chlorine as noted above.

**Exotic Species**

We are not aware of the presence of any exotic species listed in CCR Title 14, Section 245, or referenced in Part a.8 of same. Therefore, no internal or CDFG inspections were made for this report period.

**Notes**

Influent sample location: primary seawater system inlet manifold to sand filters

Effluent sample location: last manhole in discharge line at ocean bluff

Outflow estimates are dry weather flows based on metering of produced intake seawater

Temperature measurements, visual observations and samples drawn by Randolph Skrovan

Chemical analysis performed by Soil Control Lab

	LONG MARINE LABORATORY			
	ANNUAL DISCHARGE REPORT SUMMARY 2012			
	FIRST QUARTER	SECOND QUARTER	THIRD QUARTER	FOURTH QUARTER
<b>Effluent Analysis</b>				
Estimated Flow (MGD)	0.9	0.9	0.9	0.9
Settleable Solids (mg/L)	ND	ND	ND	ND
Total Suspended Solids (mg/L)	ND	ND	1.5	ND
Turbidity (NTU)	1.2	0.9	1.1	0.77
pH Value (units)	8.0	8	7.9	8
Temperature (degrees C)	13.0	14.1	15.1	12.5
Grease & Oil (mg/L)	ND	ND	ND	ND
<b>Influent Analysis</b>				
Total Suspended Solids (mg/L)	8.2	4.5	1.6	1.9
pH Value (units)	8.0	8.0	8.0	8.0
Turbidity (NTU)	4.6	2.8	2.6	1.3
Temperature (degrees C)	13.0	14.0	16.2	11.9

# SOIL CONTROL LAB

42 HANGAR WAY  
WATSONVILLE  
CALIFORNIA  
95076  
USA

UCSC Long Marine Lab  
100 Shaffer Rd  
Santa Cruz, CA 95060  
Attn: Steve Davenport

Work Order #: 3010538  
Reporting Date: January 25, 2013

Date Received: January 22, 2013  
Project # / Name: None / LML Ocean Discharge Monitoring  
Sample Identification: Influent / Grab, sampled 1/22/2013 2:45:00PM  
Sampler Name / Co.: Randolph Skrovon / UCSC Long Marine Lab  
Matrix: Water  
Laboratory #: 3010538-01

	Results	Units	RL	Analysis Method	Date Analyzed	Flags
pH	8.0	pH Units	0.1	SM4500-H+ B	01/22/13	
Turbidity	1.3	NTU	0.10	SM 2130B	01/22/13	
Total Suspended Solids	1.9	mg/L	1.2	SM 2540D	01/24/13	

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RL - are levels down to which we can quantify with reliability, a result below this level is reported as "ND" for Not Detected.

*Mike Galloway*

# SOIL CONTROL LAB

42 HANGAR WAY  
WATSONVILLE  
CALIFORNIA  
95076  
USA

UCSC Long Marine Lab  
100 Shaffer Rd  
Santa Cruz, CA 95060  
Attn: Steve Davenport

Work Order #: 3010538  
Reporting Date: January 25, 2013

Date Received: January 22, 2013  
Project # / Name: None / LML Ocean Discharge Monitoring  
Sample Identification: Effluent / Grab, sampled 1/22/2013 2:50:00PM  
Sampler Name / Co.: Randolph Skrovon / UCSC Long Marine Lab  
Matrix: Water  
Laboratory #: 3010538-02

	<u>Results</u>	<u>Units</u>	<u>RL</u>	<u>Analysis Method</u>	<u>Date Analyzed</u>	<u>Flags</u>
pH	8.0	pH Units	0.1	SM4500-H+ B	01/22/13	
Oil & Grease (total)	ND	mg/L	5.0	EPA 1664	01/24/13	
Turbidity	0.77	NTU	0.10	SM 2130B	01/22/13	
Total Settleable Solids	ND	mL/L	0.10	SM2540F	01/22/13	
Total Suspended Solids	ND	mg/L	1.2	SM 2540D	01/24/13	

---

RL - are levels down to which we can quantify with reliability, a result below this level is reported as "ND" for Not Detected.

*Mike Galloway*

# SOIL CONTROL LAB

42 HANGAR WAY  
WATSONVILLE  
CALIFORNIA  
95076  
USA

UCSC Long Marine Lab  
100 Shaffer Rd  
Santa Cruz, CA 95060  
Attn: Steve Davenport

Work Order #: 3010538  
Reporting Date: January 25, 2013

\*\*\* DEFAULT GENERAL METHOD \*\*\* - Quality Control

Soil Control Lab

Analyte	Result	MDL	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
<b>Batch PA30201 - Default Prep GenChem</b>											
<b>Blank (PA30201-BLK1)</b>											
						Prepared: 22-Jan-13 Analyzed: 24-Jan-13					
Oil & Grease (total)	ND		5.0	mg/L							
<b>Reference (PA30201-SRM1)</b>											
						Prepared: 22-Jan-13 Analyzed: 24-Jan-13					
Oil & Grease (total)	39.50		5.0	mg/L	41.0		96.5	80-120			

RL - are levels down to which we can quantify with reliability, a result below this level is reported as "ND" for Not Detected.

*Mike Galloway*

# SOIL CONTROL LAB

42 HANGAR WAY  
WATSONVILLE  
CALIFORNIA  
95076  
USA

UCSC Long Marine Lab  
100 Shaffer Rd  
Santa Cruz, CA 95060  
Attn: Steve Davenport

Work Order #: 3010538  
Reporting Date: January 25, 2013

## Classical Chemistry Parameters - Quality Control

### Soil Control Lab

Analyte	Result	MDL	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
<b>Batch PA30205 - Default Prep GenChem</b>											
<b>Duplicate (PA30205-Dup1)</b>			<b>Source: 3010538-01</b>			<b>Prepared &amp; Analyzed: 22-Jan-13</b>					
pH	8.00		0.1	pH Units		8.01			0.125	20	
<b>Reference (PA30205-SRM1)</b>			<b>Prepared &amp; Analyzed: 22-Jan-13</b>								
pH	7.25		0.1	pH Units	7.22		100	80-120			
<b>Batch PA30211 - Default Prep GenChem</b>											
<b>Blank (PA30211-BLK1)</b>			<b>Prepared &amp; Analyzed: 22-Jan-13</b>								
Turbidity	ND		0.10	NTU							
<b>Duplicate (PA30211-Dup1)</b>			<b>Source: 3010538-01</b>			<b>Prepared &amp; Analyzed: 22-Jan-13</b>					
Turbidity	1.270		0.10	NTU		1.330			4.62	20	
<b>Batch PA30236 - Default Prep GenChem</b>											
<b>Blank (PA30236-BLK1)</b>			<b>Prepared &amp; Analyzed: 24-Jan-13</b>								
Total Suspended Solids	ND		2.0	mg/L							
<b>Blank (PA30236-BLK2)</b>			<b>Prepared &amp; Analyzed: 24-Jan-13</b>								
Total Suspended Solids	ND		2.0	mg/L							
<b>Duplicate (PA30236-Dup1)</b>			<b>Source: 3010564-02</b>			<b>Prepared &amp; Analyzed: 24-Jan-13</b>					
Total Suspended Solids	51.25		6.2	mg/L		51.45			0.388	20	

RL - are levels down to which we can quantify with reliability, a result below this level is reported as "ND" for Not Detected.

*Mike Galloway*

Appendix B

Younger Lagoon Reserve Annual Report

(bound separately)



PHYSICAL & BIOLOGICAL SCIENCES DIVISION – NATURAL RESERVE SYSTEM

SANTA CRUZ, CALIFORNIA 95064

Susan Craig and Dan Carl  
California Coastal Commission  
Santa Cruz, CA

November 1, 2012

Dear Susan and Dan,

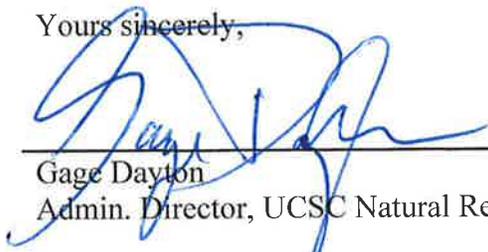
I hope you are both well. Along with this letter we have included our annual reports that summarize work conducted at Younger Lagoon Reserve during fiscal year 2011-2012. There are two reports:

- 1) Our annual Younger Lagoon Report
- 2) The annual monitoring report as per the CLRDP requirements for beach access

Combined, these reports provide a thorough update of the year's activities. Once again, it was another great year on all fronts. Research and education use continued to increase and we have made significant strides in implementing restoration of the Terrace Lands. Following the mission of the UC Natural Reserve System, we continue to incorporate faculty and students into all aspects of work and are learning a great deal about restoration techniques and coastal upland communities in general. The Scientific Advisory Committee continued to provide guidance and comments on restoration strategies and targets, reports, and overall goals and objectives.

If you have any questions at all please do not hesitate to contact me. Also, it has been almost three years since we had you all out at the site for a walk and talk. We would like to have you back out to show you what we have accomplished, talk about upcoming goals, etc. A good time to do this would be early winter sometime after the New Year as restoration efforts will be going strong and you can see the work in progress. Please let me know if you would like to schedule an hour or two and we'll put it on the calendar.

Yours sincerely,



---

Gage Dayton

Admin. Director, UCSC Natural Reserves

Cc: Paul Koch, UCSC, Dean of Physical and Biological Sciences  
Don Croll, Faculty Director, UCSC Natural Reserves  
Karen Holl, UCSC, Faculty Director, Younger Lagoon Reserve  
Dean Fitch, UCSC, Director of Campus Planning  
Elizabeth Howard, Younger Lagoon Reserve Manager

Appendix C  
Annual Mitigation Monitoring Report

# UC Santa Cruz Marine Science Campus CLRDP EIR 2012 Annual Mitigation Monitoring Report

## ***Introduction***

The California Environmental Quality Act (CEQA) requires that a Lead Agency establish a program to monitor or report on mitigation measures adopted as part of the environmental review process to avoid or reduce the severity and magnitude of potentially significant environmental impacts associated with project implementation. CEQA (Public Resources Code Section 21081.6 (a) (1)) requires that a mitigation monitoring or reporting program be adopted at the time that the agency determines to carry out a project for which an EIR has been prepared to ensure that mitigation measures identified in the EIR are implemented.

The Regents of the University of California (The Regents) approved the Coastal Long Range Development Plan (CLRDP) for the UC Santa Cruz Marine Science Campus and certified the Environmental Impact Report (EIR) in September 2004; a Mitigation Monitoring Program (MMP) for the CLRDP EIR was adopted at the same time. The CLRDP MMP, which is presented in Table 5-1 of the Final EIR, 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 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.

The MMP includes the following components:

**Mitigation Measures:** The mitigation measures in the MMP 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 Drainage Concept Plan, Resource Management Plan, and the Design Guidelines, are summarized.<sup>1</sup>

**General versus Project-Specific Measures:** The MMP specifies whether the mitigation measure or CLRDP element is a general Campus measure, which is implemented by the Campus on an ongoing basis, or a Project-Specific measure, which is triggered by and implemented in conjunction with the development of individual projects.

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<sup>1</sup> After The Regents certified the CLRDP EIR, approved the September 2004 draft of the CLRDP and adopted the MMP, minor changes were made to the text and numbering of some of the CLRDP measures included in the MMP. The title of Appendix B to the CLRDP, "Stormwater Concept Plan," was also changed to "Drainage Concept Plan." The Regents approved the final CLRDP, including these changes, in December 2008. In this Annual Report, the text and numbering of the CLRDP measures are consistent with the December 2008 final CLRDP and therefore may differ from the MMP as presented in the Final EIR.

**Mitigation Timing:** Identifies the timing for implementation of each action.

**Monitoring and Reporting Responsibility:** Identifies the UCSC office responsible for undertaking the required action and monitoring the measure.

As indicated above, the measures included in the MMP are divided into two categories: *general campus measures*, which are implemented by the campus on an ongoing basis, and *project-specific measures*, which are implemented in conjunction with the development of individual campus construction projects. Examples of general campus mitigation measures are: 1) public access policies, and 2) the Campus' transportation demand management (TDM) program, which is designed to reduce the number of vehicle trips to the campus. Examples of project-specific mitigation measures are: 1) the protection of specific biotic resources or cultural resources during construction of a building, and 2) siting and design parameters for new development. In addition to project-specific measures identified in the CLRDP EIR, the mitigation monitoring program for a development project may also include mitigation measures identified in the project-level CEQA document, which apply only to that project.

### ***Monitoring and Reporting Procedures***

The responsibilities of mitigation implementation, monitoring and reporting extend to numerous UC Santa Cruz departments and offices. The unit director or department lead officer of the identified unit or department is directly responsible for ensuring that the responsible party complies with the mitigation. Physical Planning and Construction is responsible for the overall administration of the program and for assisting other campus staff with their responsibilities, to ensure that they understand their charge and implement the required measures accurately, completely, and on schedule.

In addition to overseeing the specific procedures identified in the following table for implementation of each mitigation measure, Physical Planning and Construction is responsible for preparing this Annual Mitigation Monitoring Report. The purpose of the Annual Mitigation Monitoring Report is to report on progress of implementation of general campus mitigation measures (that is, those measures that are not tied to specific development projects) and, for each project under development during the preceding period, to identify applicable mitigation measures and document the status of compliance for each project. The Annual Mitigation Monitoring Report is available for review by appointment at the office of Physical Planning and Construction on campus, is posted on the Campus' LRDP website (<http://lrpd.ucsc.edu/>), and is submitted to the Executive Director of the California Coastal Commission as part of the CLRDP Annual Report.

For each general campus measure, a representative of the responsible campus unit provides an annual status report to Physical Planning and Construction staff. For each project, a checklist is prepared for all CLRDP EIR and project-level mitigations applicable to the project. Reporting on the status of project-specific mitigations is the responsibility of each project manager, who updates the checklist on a quarterly basis.

The annual report also provides a description of activity undertaken by each responsible department relative to each mitigation measure and, if applicable, links to detailed reports or other supporting documentation of mitigation activity.

## ***Summary of 2012 Mitigation Activities***

### **General Campus Mitigation Measures**

Table 1, *Status of General Campus Measures*, lists all of the general campus measures and describes their status for the 2012 reporting year (January through December, 2012).

### **Project Mitigation Monitoring**

In 2012, the Campus implemented the mitigation monitoring program for NOID 10-2, Specific Resource Plan Phase 1A, and NOID 12-2, Coastal Access Overlooks. The annual mitigation monitoring report for these two projects are attached.

UC Santa Cruz Coastal Long Range Development Plan  
 2012 Annual Mitigation Monitoring Report  
 Table 1: Status of General Campus Measures

Mitigation/ Implementation Measure ID	Mitigation/Implementation Measure Description	Procedures and Timing	Notes	2011 Status
Mitigation 4.2-1	Install landscaped fence along Younger Ranch property line.	Install fence and landscaping. Prior to ground-breaking of any CLRDP project components, document that fence and landscaping have been installed prior to construction.	--	Fence has been constructed.
Mitigation 4.15-1	Contribute fair share towards cost of improvements to Mission/Bay intersection	During project-level environmental review, analyze number of peak hour trips added to this intersection by the project. When City and/or Caltrans proposes improvement at this intersection: Negotiate with City and Caltrans to determine an appropriate fair share contribution towards necessary road improvements.	Per 2008 Comprehensive Settlement Agreement, UCSC share of the cost of City intersection improvements will be paid on a project-by-project basis based on the number of trips projected to be generated by each project.	Not triggered. No trip-generating projects have been approved under the CLRDP.
Mitigation 4.15-2	Contributed fair share towards construction of Delaware Ave. pedestrian path.	Prior to occupancy of first project: Negotiate with City to determine an appropriate fair share contribution towards necessary road improvements.	--	Not triggered. No trip-generating projects have been approved under the CLRDP.
Mitigation 4.15-4	Contribute fair share to improvements at Mission/Chestnut intersection	During project-level environmental review, analyze number of peak hour trips added to this intersection by the project. When City and/or Caltrans proposes improvement at this intersection: Negotiate with City and Caltrans to determine an appropriate fair share contribution towards necessary road improvements.	Per 2008 Comprehensive Settlement Agreement, UCSC share of the cost of City intersection improvements will be paid on a project-by-project basis based on the number of trips projected to be generated by each project.	Not triggered. No trip-generating projects have been approved under the CLRDP.

UC Santa Cruz Coastal Long Range Development Plan  
 2012 Annual Mitigation Monitoring Report  
 Table 1: Status of General Campus Measures

Mitigation/ Implementation Measure ID	Mitigation/Implementation Measure Description	Procedures and Timing	Notes	2011 Status
Mitigation 4.15-6	Contribute fair share to improvements at High/Western, Empire Grade/Heller, SR1/SR intersections	During project-level environmental review, analyze number of peak hour trips added to these intersections by each project. When appropriate jurisdiction proposes improvements at the affected intersection: Negotiate with appropriate jurisdiction to determine an appropriate fair share contribution towards necessary road improvements.	Per 2008 Comprehensive Settlement Agreement, UCSC share of the cost of City intersection improvements will be paid on a project-by-project basis based on the number of trips projected to be generated by each project.	Not triggered. No trip-generating projects have been approved under the CLRDP.
Mitigation 4.16-1b	Compliance with City water demand reduction policies	Following the adoption of pertinent policies by the City of Santa Cruz. Procedure to be determined, based on City policy.	Note: Per 2008 Comprehensive Settlement Agreement, if City implements its 2009 Drought Contingency Plan, University will reduce water consumption in accordance with that plan.	The Campus complied with the water use restrictions required under the Stage 1 Water Shortage Alert that was in effect May 1 - October 31, 2012.
IM 3.8.2	Agricultural hold-harmless and indemnity restrictions	Before construction of facilities located north of existing NMFS facility: Initiate negotiations with owners of Younger Ranch to enter into agreement.	--	Not triggered. No development north of existing NMFS facility has been approved.
General-RMP	Implement RMP	As specified in Table 13 of the 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.	--	See CLRDP Annual Report for status of RMP.

UC Santa Cruz Coastal Long Range Development Plan  
 2012 Annual Mitigation Monitoring Report  
 Table 1: Status of General Campus Measures

Mitigation/ Implementation Measure ID	Mitigation/Implementation Measure Description	Procedures and Timing	Notes	2011 Status
IM 3.5.1	Protection and enhancement of YLR habitats.	Implement Resource Management Plan (see above for procedures). Implement Drainage Concept Plan (see Hydrology and Water Quality, below, for procedures). Control and remove weeds, plant native plants	--	See CLRDP Annual Report for status of RMP.
IM 3.5.2	Protection of special status species in YLR.	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)	--	See CLRDP Annual Report for status of RMP.
IM 3.6.1	Provision of controlled access within YLR.	See IM 6.2.1 under Recreation, below. No additional procedures required.	--	NA
IM 3.10.1	EH&S manage use, containment and cleanup of hazardous materials and petroleum	Ongoing: 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. Annually: 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)	--	UCSC EH&S provides guidelines, consultation and oversight to ensure hazardous materials are stored, transported and disposed in accordance with federal and state regulations. Personnel are trained to call EH&S for assistance if there is a large spill of hazardous materials or if they are not equipped to clean up a small spill safely. Spill emergency instructions are posted in areas where hazardous materials are stored or used. (Source: Dan Blunk, EH&S)

UC Santa Cruz Coastal Long Range Development Plan  
 2012 Annual Mitigation Monitoring Report  
 Table 1: Status of General Campus Measures

Mitigation/ Implementation Measure ID	Mitigation/Implementation Measure Description	Procedures and Timing	Notes	2011 Status
Drainage Concept Plan- General	Implement BMPS in Drainage Concept Plan	Annually: Document implementation of best management practices.	--	No projects with new impervious surface have been constructed so no treatment BMPs are in place. The campus implements source control BMPs on an ongoing basis. See CLRDP Annual Report, Appendix A, Water Quality Report, for details.
Water Quality Monitoring	Sample stormwater as specified in Drainage Concept Plan	As specified in the Drainage Concept Plan (procedures and timing in the MMP are from the Draft CLRDP and no longer apply).	--	Not triggered. Storm water sampling will be required after treatment BMPs have been installed.
Maintain stormwater system	Maintain storm water system as specified in Drainage Concept Plan	As specified in the Drainage Concept Plan (procedures and timing in the MMP are from the Draft CLRDP and no longer apply).	--	Not triggered. No development projects with storm water systems have been constructed under the CLRDP.
IM 7.1.8	Irrigation and use of chemicals for landscaping.	Before occupancy of first project developed under the CLRDP: Establish policies for irrigation and use of chemicals in landscaping to minimize erosion potential and runoff into habitat areas or the ocean.	--	The Campus currently uses pesticides only within the context of an Integrated Pest Management Program, to limit the use of chemicals for fertilizer and/or weed and pest control to the maximum extent possible.
IM 7.2.1	Drainage system monitoring and maintenance.	After major storm events, during occupancy: Conduct and document inspections.	--	Not triggered. No treatment BMPs are in place.
IM 6.1.1	Free public access for visitors.	Annually, following approval of the CLRDP: Document consistency of procedures with Policy 6.1.	--	Access to the Marine Science Campus is free. A fee is charged for access to the Seymour Center.
IM 6.1.4	Public access overlooks.	Construct overlooks per schedule in CLRDP Chapter 9. Annually, document status.	--	See CLRDP Annual Report, Section 7.1.

UC Santa Cruz Coastal Long Range Development Plan  
 2012 Annual Mitigation Monitoring Report  
 Table 1: Status of General Campus Measures

<b>Mitigation/ Implementation Measure ID</b>	<b>Mitigation/Implementation Measure Description</b>	<b>Procedures and Timing</b>	<b>Notes</b>	<b>2011 Status</b>
IM 6.1.5	Docent-led tours and education programs for the public.	Annually: Document continued educational programs and docent-led tours.	--	Supervised site tours of parts of Long Marine Lab, as well as the Seymour Center exhibits halls and outdoor areas are offered three times a day on the days when the Seymour Center is open. Tours of marine mammal research areas are offered twice a month. The Seymour Center also offers a variety of field trips for K-12 and community college groups.
IM 6.2.3	Access to resource protection areas.	Annually: Document access policies and procedures. Ongoing: Enforce access policies.	--	Public access to Younger Lagoon is limited to 90-minute tours, which are offered twice a month. Access to other resource protection areas is not controlled at this time.
IM 6.2.8	Bicycles on the Marine Science Campus.	Annually: Document access policies and procedures.	--	Consistent with this requirement, bicycles are allowed on the Marine Science Campus except on controlled access trails.

UC Santa Cruz Coastal Long Range Development Plan  
 2012 Annual Mitigation Monitoring Report  
 Table 1: Status of General Campus Measures

<b>Mitigation/ Implementation Measure ID</b>	<b>Mitigation/Implementation Measure Description</b>	<b>Procedures and Timing</b>	<b>Notes</b>	<b>2011 Status</b>
IM 6.2.9	Domestic pets.	Include prohibition on pets in lease agreement for on-site housing. Within one year of approval of CLRDP: Use signs and other media to inform public that pets are not permitted on the campus.	--	Reserve and LML staff continued to work with the UCSC Police Department to prepare for implementing a no-pet policy. LML staff, students and faculty have been informed that a no-pet policy will be implemented in the near future. Currently dogs are allowed only on leashes, and staff talk to dog owners without leashes about the importance of using leashes. The Campus is planning to begin enforcing a no-pet policy when new way-finding signage is installed and modifications to the campus entry have been made as part of the development proposed under NOID 6 (13-1).
IM 6.2.10	Public access signage.	As new trails are developed: Maintain existing signs and provide new signage and other media. Document their content and distribution.	--	No new trails have been developed since the CLRDP was certified.
General-TDM	Implement Transportation Demand Management (TDM) measures as detailed in Policies 5.3 through 5.8.	Annually: Document implementation of TDM measures	--	See CLRDP Annual Report for status of TDM measures.

UC Santa Cruz Coastal Long Range Development Plan  
 2012 Annual Mitigation Monitoring Report  
 Table 1: Status of General Campus Measures

<b>Mitigation/ Implementation Measure ID</b>	<b>Mitigation/Implementation Measure Description</b>	<b>Procedures and Timing</b>	<b>Notes</b>	<b>2011 Status</b>
IM 8.2.2	Seawater system.	The seawater system shall be operated in a manner that will protect against spillage and that will sustain the biological productivity and quality of coastal waters, streams, and wetlands.	--	The seawater system was operated in compliance with NPDES permit requirements. See CLRDP Annual Report, Appendix A, Water Quality Report, for documentation of compliance with permit requirements.

SRP Phase 1A Mitigation Monitoring Program					Monitoring and Reporting Checklist						
Measure #	Measure Text	Monitoring and Reporting Procedure	Monitoring and Reporting Responsibility	Timing	2010 PM – Elizabeth Howard, Field Manager, YLR	2011 PM – Elizabeth Howard, Field Manager, YLR	2012 PM – Elizabeth Howard, Manager, YLR	2013	2014	2015	2016
<b>CLRDP Policy 3.2</b>	<b>Protection and Restoration of Habitat Areas:</b> 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 wastewater discharges, controlling runoff, preventing depletion of ground water supplies and substantial interference with surface water flow, encouraging wastewater reclamation, maintaining natural vegetation buffer areas that protect riparian habitats, and minimizing alteration of natural watercourses. Campus natural areas (i.e., areas outside of defined development zones) shall be protected, restored, enhanced, and managed as high-quality open space and natural habitat areas.	Implemented through development of this SRP and, for SRP, through implementation of MM 4.4-1, 4.4-2 and 4.5-1, below; reporting as described in specific mitigation measures, below.	PP&C	Prior to and during construction	NOID 10-2, The SRP, was approved by the CCC in September 2010. Protection and restoration activities on the Terrace Lands in 2010 include baseline monitoring, Priority 1 weed removal, seed collection, and native plantings.	Protection and restoration activities on the Terrace Lands in 2011 under the SRP include baseline monitoring, Priority 1, 2 and 3 weed removal/control, seed collection, and native plantings.	Protection and restoration activities on the Terrace Lands in 2012 under the SRP include compliance monitoring, Priority 1, 2 and 3 weed removal/control, seed collection, and native plantings.				
<b>CLRDP MM 4.4-1</b>	<b>CA Red-legged Frog:</b> For all projects proposed in the upper terrace under the CLRDP, the University will implement the following:  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.	Conduct survey. Document results.  If CRLF are observed, consult with USFWS.  Conduct meetings with contractor(s) and construction personnel. Include mitigation specifications in construction contract.	PP&C	Prior to construction, of projects in upper terrace  Prior to construction, if CRLF are observed  Before beginning construction	The campus conducted annual fire break mowing along the southern and eastern perimeter of the upper terrace two times in 2010. USFWS was consulted prior to the mow and supported the campus approach to mowing, which required a staff member to walk the area prior to mowing in order to check for wildlife. If a frog (any kind) was seen the staff member was to contact Gage Dayton, or another permitted biologist, to determine whether the frog is a CRLF. No frogs of any kind were observed prior to mowing.  The same protocol was followed for mowing elsewhere on the reserve and for soil scraping of five experimental restoration plots on the lower terrace. (20'x20' plots, scraped 2-3" with tractor mounted blade).	The campus conducted annual fire break mowing along the southern and eastern perimeter of the upper terrace two times in 2011. Staff followed the mowing protocol developed with USFWS in 2010. This protocol requires a staff member to walk the area prior to mowing in order to check for wildlife. If a frog (any kind) was seen the staff member was to contact Gage Dayton, or another permitted biologist, to determine whether the frog is a CRLF. No frogs of any kind were observed prior to mowing.  The same protocol was followed for mowing elsewhere on the reserve.	The campus conducted annual fire break mowing along the southern and eastern perimeter of the upper terrace two times in 2012. Staff followed the mowing protocol developed with USFWS in 2010. This protocol requires that a staff member walk the area prior to mowing in order to check for wildlife. If a frog (any kind) was seen the staff member was to contact Gage Dayton, or another permitted biologist, to determine whether the frog is a CRLF. No frogs of any kind were observed prior to mowing.  The same protocol				

SRP Phase 1A Mitigation Monitoring Program					Monitoring and Reporting Checklist						
Measure #	Measure Text	Monitoring and Reporting Procedure	Monitoring and Reporting Responsibility	Timing	2010 PM – Elizabeth Howard, Field Manager, YLR	2011 PM – Elizabeth Howard, Field Manager, YLR	2012 PM – Elizabeth Howard, Manager, YLR	2013	2014	2015	2016
							was followed for mowing elsewhere on the reserve.				
<b>CLRDP MM 4.4-2</b>	<p><b>Nesting Birds:</b> 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> <p>A qualified wildlife biologist will conduct preconstruction surveys of all potential nesting habitat. For burrowing owls, such surveys will follow the most recent CDFG Burrowing Owl Survey Protocol and Mitigation Guidelines. 1</p> <p>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.</p> <p>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>	<p>Conduct survey. Document results.</p> <p>Create no-disturbance buffer in consultation with qualified biologist. Include mitigation specifications in construction contract.</p>	PP&C	<p>Before beginning construction on each project</p> <p>Before beginning construction, if active raptor nests are found</p>	Scraping of the experimental restoration plots was performed outside the breeding season. No other construction was performed during 2010.	<p>Summer mowing of a restoration area on the south east side of the lower terrace was conducted in June 2011.</p> <p>A survey of the area for nesting birds was performed by Gage Dayton and Elizabeth Howard immediately prior to mowing. No nests (active or inactive) were found prior to mowing.</p> <p>Mechanical trenching (using a Ditch Witch walk behind trencher) of a fence line in order to facilitate the installation of low-key chicken wire fencing to protect restoration plantings and experimental plots from herbivory and trampling was performed on August 17, 2011. No other construction was performed during 2011.</p> <p>A survey of the area for nesting birds was performed by Gage Dayton and Elizabeth Howard immediately prior to trenching. No nests (active or inactive) were found prior to mechanical trenching.</p>	<p>Summer mowing of a restoration area on the south east side of the lower terrace was conducted in May 2012.</p> <p>A survey of the area for nesting birds was performed by Younger Lagoon Reserve staff members Tim Brown and Ori Chafe immediately prior to mowing. No nests (active or inactive) were found prior to mowing.</p> <p>No ground-disturbing activities occurred during the breeding season.</p>				
<b>CLRDP MM 4.5-1</b>	<b>Human Remains:</b> If human remains are discovered during the construction of a development project under the CLRDP, the University and/or its employees shall notify	Include in construction contract the requirement that the University be notified if suspected human bone is	PP&C	Before beginning construction	The mechanical scraping of the experimental restoration plots was carried out by UCSC Ground	The mechanical trenching was carried out by UCSC Ground Services. No	No human remains were discovered during 2012.				

<sup>1</sup> California Department of Fish and Game, *Staff Report on Burrowing Owl Mitigation*, The Resources Agency, October 17, 1995.

SRP Phase 1A Mitigation Monitoring Program					Monitoring and Reporting Checklist						
Measure #	Measure Text	Monitoring and Reporting Procedure	Monitoring and Reporting Responsibility	Timing	2010 PM – Elizabeth Howard, Field Manager, YLR	2011 PM – Elizabeth Howard, Field Manager, YLR	2012 PM – Elizabeth Howard, Manager, YLR	2013	2014	2015	2016
	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.	discovered.  Contact archaeologist and County Coroner in the event of discovery of suspected human bone. Contact California Native American Heritage Commission and conduct Native American consultation if Coroner determines the remains are Native American.		During construction	Services. No human remains were discovered during 2010.	human remains were discovered during 2011.					
<b>CLRDP IM 3.9.1</b>	<b>Cultural Resources Construction Monitoring:</b> Should archaeological and/or paleontological resources be encountered during any construction on the Marine Science Campus, all activity that could damage or destroy these resources shall be temporarily suspended until qualified archaeologist/paleontologists and Native American representatives have examined the site and mitigation measures have been developed that address and proportionately offset the impacts of the project on archaeological and/or paleontological resources. Development shall incorporate measures to address issues and impacts identified through any archaeologist/paleontologist and/ or Native American consultation.	Include in construction contract the requirement that work be suspended if archaeological resources are disclosed.  Contract with qualified archaeologist to develop appropriate mitigation measures.	PP&C	Before beginning construction  If archaeological resources are disclosed	The mechanical scraping of the experimental restoration plots was carried out by UCSC Ground Services. No archaeological or paleontological resources were discovered during 2010.	The mechanical trenching was carried out by UCSC Ground Services. No archaeological or paleontological resources were discovered during 2011.	No archaeological or paleontological resources were discovered during 2012.				
<b>CLRDP IM 3.10.1</b>	<b>Use, Containment and Cleanup of Hazardous Materials.</b> 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.; document activity of relevant EH&S programs	UCSC EH&S	Ongoing, frequency varies with the type and quantity of hazardous materials; document annually	As part of the Younger Lagoon Natural Reserve Restoration effort, herbicide (Round Up Pro) was applied to five 20’ x 20’ experimental plots in 2010. The application was done by a Grounds Department Employee trained in herbicide use working under the campus’ IPC Applicator’s License.  Younger Lagoon Natural Reserve staff conducted a joint clean-up of the upper terrace with Grounds Services and EH&S in July 2010. All persons participating in the clean-up were trained in the basics of hazardous waste disposal. 6020 lbs of refuse/debris were removed from the site, including a small amount of hazardous waste (batteries, used needles, spent fuel	As part of the Younger Lagoon Natural Reserve Restoration effort, herbicide (Glyphosate Pro) was applied to several restoration areas on the lower terrace in 2011. The applications were done by Grounds Department Employees and UCSC Natural Reserves Staff trained in herbicide use working under the campus’ IPC Applicator’s License.	As part of the Younger Lagoon Natural Reserve Restoration effort, herbicide (Glyphosate Pro) was applied to several restoration areas on the lower terrace in 2012. The applications were done by Grounds Services Employees and UCSC Natural Reserves Staff trained in herbicide use working under the campus’ IPC Applicator’s License.				

SRP Phase 1A Mitigation Monitoring Program					Monitoring and Reporting Checklist						
Measure #	Measure Text	Monitoring and Reporting Procedure	Monitoring and Reporting Responsibility	Timing	2010 PM – Elizabeth Howard, Field Manager, YLR	2011 PM – Elizabeth Howard, Field Manager, YLR	2012 PM – Elizabeth Howard, Manager, YLR	2013	2014	2015	2016
					containers, etc), which were disposed of through the campus hazardous waste stream.						
<b>CLRDP Policy 7.1</b>	<b>Productivity and Quality of Coastal Waters.</b> The Marine Science Campus shall be developed and used in a manner that shall sustain and, where feasible, enhance and restore, the biological productivity and quality of coastal waters on and adjacent to the Campus through controlling, filtering, and treating runoff and other non-point sources of pollution, preventing depletion of groundwater supplies and substantial interference with surface water flow, encouraging wastewater reclamation, and maintaining natural vegetation buffer areas that protect riparian habitats.	Implement Resource Management Plan as described in this SRP Construction practices consistent with Stormwater Concept Plan	PP&C	Throughout construction	No new development occurred on the MSC in 2010; however, natural vegetation buffer areas that protect riparian habitats were maintained by Younger Lagoon Natural Reserve staff.	No new development occurred on the MSC in 2011; however, natural vegetation buffer areas that protect riparian habitats were maintained by Younger Lagoon Natural Reserve staff.	During construction of the Coastal Access Overlooks Project (NOID 12-2), runoff was controlled, filtered and treated according to the contractor's Water Pollution Control Plan. Natural vegetation buffer areas that protect riparian habitats were maintained by Younger Lagoon Natural Reserve staff.				
<b>CLRDP IM 7.1.8</b>	<b>Irrigation and Use of Chemicals for Landscaping.</b> Any water used for landscape irrigation on the Marine Science Campus shall not be applied in a manner that would cause significant erosion. Any use of chemicals for fertilizer and/or weed and pest control shall be minimized to the degree feasible, including as required by the Drainage Concept Plan, and any chemicals unavoidably used shall not enter habitat areas or the ocean in concentrations sufficient to harm wildlife and/or to degrade habitat.	Establish polices for irrigation and use of chemicals in landscaping to minimize erosion potential and runoff into habitat areas or the ocean.	Physical Plant	Before occupancy of first project developed under the CLRDP	Whenever possible, restoration efforts conducted by Younger Lagoon Natural Reserve were not irrigated. When needed, supplemental water was applied by hand. When supplemental water was needed, application was minimal and targeted to restoration plantings to minimize erosion.  Herbicide (Round Up Pro) was applied to five 20' x 20' experimental restoration plots in 2010. The application was done by a Grounds Department Employee trained in herbicide use working under the campus IPC Applicator's License.	Whenever possible, restoration efforts conducted by Younger Lagoon Natural Reserve were not irrigated. When needed, supplemental water was applied by hand. When supplemental water was needed, application was minimal and targeted to restoration plantings to minimize erosion.  Herbicide (Glyphosate Pro) was applied to several restoration areas on the lower terrace in 2011. The applications were done by Grounds Department Employees and UCSC Natural Reserves Staff trained in herbicide use working under the campus' IPC	Whenever possible, restoration efforts conducted by Younger Lagoon Natural Reserve were not irrigated. When needed, supplemental water was applied by hand. When supplemental water was needed, application was minimal and targeted to restoration plantings to minimize erosion.  As part of the Younger Lagoon Natural Reserve Restoration effort, herbicide (Glyphosate Pro) was applied to several restoration				

SRP Phase 1A Mitigation Monitoring Program					Monitoring and Reporting Checklist						
Measure #	Measure Text	Monitoring and Reporting Procedure	Monitoring and Reporting Responsibility	Timing	2010 PM – Elizabeth Howard, Field Manager, YLR	2011 PM – Elizabeth Howard, Field Manager, YLR	2012 PM – Elizabeth Howard, Manager, YLR	2013	2014	2015	2016
						Applicator's License.	areas on the lower terrace in 2012. The applications were done by Grounds Department Employees and UCSC Natural Reserves Staff trained in herbicide use working under the campus' IPC Applicator's License.				

**Public Coastal Access Overlooks Project: Mitigation Monitoring Checklist**

Measure #	Measure Text	Monitoring Procedure	Monitoring and Reporting Responsibility	Timing	Implementation (describe how and when measure was implemented, list relevant documentation in project file)
<b>Agricultural Resources</b>					
<b>CLRDP EIR General Mitigation Measure 4.2-1</b>	<ul style="list-style-type: none"> <li>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.</li> <li>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.</li> <li>UCSC will install the fence and landscaping prior to groundbreaking of any CLRDP project components.</li> </ul>	Consult with adjacent land owner on fence design and ensure that fence is installed as required.	PP&C AND YLR Manager	Prior to groundbreaking for Overlooks construction	Work Complete by Grounds Services
<b>Air Quality</b>					
<b>CLRDP EIR Project Specific Mitigation Measure 4.3-1</b>	<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"> <li>Water all active construction areas at least twice daily. Frequency shall be based on the type of operation, soil, and wind exposure.</li> <li>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).</li> <li>Pave, apply water two times daily, or apply non-toxic soil stabilizers to all unpaved access roads, parking areas, and construction staging areas.</li> <li>Sweep daily with water sweepers any paved access roads, parking areas, and staging areas at construction sites.</li> <li>Sweep streets daily with water sweepers if visible soil material is carried onto adjacent public streets.</li> <li>Hydroseed or apply (non-toxic) soil stabilizers to inactive construction areas or previously graded areas left inactive for ten days or more.</li> <li>Enclose, cover, water twice daily or apply (non-toxic) soil stabilizers to exposed stockpiles (dirt, sand, etc.).</li> <li>Limit traffic speeds on unpaved roads to 15 miles per hour.</li> </ul>	<p>Select measures appropriate to Overlooks Project and include in construction contract specifications.</p> <p>Monitor throughout construction to verify implementation.</p>	PM  PM	Prior to issuance of contract  Throughout construction	Part of contract documents and contractor performed throughout contract. Section 01500, 1.13.

Public Coastal Access Overlooks Project: Mitigation Monitoring Checklist					
Measure #	Measure Text	Monitoring Procedure	Monitoring and Reporting Responsibility	Timing	Implementation (describe how and when measure was implemented, list relevant documentation in project file)
Biological Resources					
CLRDP IM 3.2.11	<b>CRLF Protection.</b> Surveys for California red-legged frog shall be conducted prior to authorization of any development project within 100 meters of an identified wetland resource. All authorized development shall include construction and post-construction safe passage and other mitigation measures (e.g., barriers along development perimeters) as appropriate.	CRLF survey conducted and reported in this IS  Additional identification and exclusion measures set forth in BIO-2, below	PP&C/ Biologist	Prior to project approval	Performed prior to project approval.
CLRDP IM 3.2.12	<b>USFWS Consultation Required.</b> Development project authorizations shall include either (1) evidence of authorization by the U.S. Fish and Wildlife Service, including but not limited to a Habitat Conservation Plan/incidental take permit; or (2) evidence from the USFWS that no authorization is required.	Consult with USFWS  Include recommended CRLF avoidance/protection measures in project and implement during construction and/or obtain Incidental Take permit as necessary	PP&C  PP&C/ PM	Prior to project approval During construction	Performed prior to work and throughout construction. Concurrence letter from USFWS dated Sept. 23, 2010.
CLRDP IM 3.2.14	<b>Non-Invasive Native Plant Species Required.</b> All landscaping and vegetation on the Campus (including restoration and enhancement plantings, screening vegetation, storm water system plantings, ornamental plantings, and all other plant material) shall be limited to non-invasive native plant species that are appropriate to the habitat and region and that are grown from seeds or vegetative materials obtained from local natural habitats so as to protect the genetic makeup of natural populations. Horticultural varieties shall not be used. <del>Except for the planting of Monterey cypress, only locally collected seed, cuttings, and/or other propagules shall be used for landscaping. If feasible, materials should be collected from coastal habitats that are located within approximately one mile of the Campus and seaward of Highway 1 similar habitats along the coast of western Santa Cruz county and southern San Mateo County (first and lower reaches of the second marine terraces).</del> <sup>1</sup>	Ensure that Overlooks Project construction contract specifies that project will include only native plantings as specified.  Monitor landscaping work to ensure that plantings are acquired and used as specified	PM  PM	Prior to issuing construction contract  During landscape planting and restoration	Specification included in contract documents and contractor collaborated with UCNRS staff during construction.
CLRDP IM 3.3.1	<b>Pre-development Evaluation of Wetland Conditions.</b> 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.	Study carried out in summer 2010 as required. No further monitoring needed.			
CLRDP IM 3.4.3	<b>Noise Intrusion into YLR.</b> YLR shall not be exposed to noise generated by human activity on the terrace portion of the	See Noise section, below			

<sup>1</sup> Changes suggested by YLR Field Manager

**Public Coastal Access Overlooks Project: Mitigation Monitoring Checklist**

Measure #	Measure Text	Monitoring Procedure	Monitoring and Reporting Responsibility	Timing	Implementation (describe how and when measure was implemented, list relevant documentation in project file)
	Marine Science Campus in excess of 60 dBA CNEL, as measured at the boundary of the YLR. For the purposes of this measure, "dBA CNEL" means a 24-hour energy equivalent level derived from a variety of single noise events, with weighting factors of 5 and 10 dBA applied to the evening (7pm to 10pm) and nighttime (10pm to 7am) periods, respectively, to allow for the greater sensitivity to noise during these hours.				
<b>CLRDP IM 3.4.4</b>	<b>Pre-development Evaluation of ESHA Conditions.</b> An evaluation of the development area shall be conducted prior to each development project. The evaluation shall include changed site conditions that may affect ESHA values and new information that was not known at the time of the original ESHA determination. To the extent ESHA 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 ESHA and uses and development limited in accordance with that designation (see section 5.2.2, Resource Protection). For any newly identified ESHA area, an appropriate buffer shall be established, based on site-specific biological evaluation, and designated as Resource Protection Buffer.	Study carried out as required in summer 2010. No further monitoring needed.			
<b>CLRDP IM 4.3.1</b>	<b>Visual Intrusion into YLR.</b> Development adjacent to YLR shall be sited and designed so that activity and direct light will not be visible from within YLR.	Ensure that final design for Overlooks D and E maximizes topographic and vegetal screening	PM	Prior to approval of final design	Design was reviewed prior to finalization and screening was incorporated
<b>CLRDP IM 4.3.2</b>	<b>Visual Intrusion into Terrace ESHA and Other Areas Outside of Development Zones.</b> Development shall be sited and designed so that activity and direct light that may be visible from outside of development zones is limited to the maximum extent feasible, and so that any activity and/or direct light that is unavoidably visible is minimized in its intensity. In determining the measures needed to limit visual intrusion to the maximum extent feasible, the University shall consult with the manager of Younger Lagoon Reserve and the California Department of Fish and Game.	Ensure that final design of Overlook A maximizes vegetal screening from terrace ESHA W5; consult with CDFG and YLR Manager to determine whether additional screening is needed; include additional screening as needed	PM	Prior to approval of final design	Design was reviewed prior to finalization and design was approved by UCNRS staff.
<b>Overlooks Project-Specific Mitigation Measure BIO-1</b>	<p>A qualified botanist will conduct a focused plant survey for special-status plant species on and within 100 feet of all areas of ground disturbance during the spring-summer blooming period immediately prior to the construction period. If no special-status plant species are observed during the focused survey, no additional mitigation is necessary.</p> <p>If any special status plants are observed on any of the project sites, the biologist will map and quantify the population will be and a suitable buffer zone will be established based on species requirements, proximity to the work area, and other site-specific factors. The identified population or individuals will be protected during construction by minor footprint modification, exclusion fencing or other protective measures.</p> <p>If protection of the sensitive areas in this manner would preclude construction, and the population therefore cannot be</p>	<p>Ensure that survey is conducted as specified.</p> <p>Delineate and avoid/ protect plants as specified</p> <p>If avoidance is infeasible, consult with CDFG/ USFWS and/ or CCC to identify</p>	<p>PP&amp;C PM/ Botanist</p> <p>PM/ Botanist</p> <p>PP&amp;C PM / Botanist</p>		Work area was surveyed by UCNRS staff and confirmed not special-status plants would be impacted

**Public Coastal Access Overlooks Project: Mitigation Monitoring Checklist**

Measure #	Measure Text	Monitoring Procedure	Monitoring and Reporting Responsibility	Timing	Implementation (describe how and when measure was implemented, list relevant documentation in project file)
	<p>avoided by the project, a qualified botanist will quantify impacts to the population, and the campus will consult with regulatory agencies (California Coastal Commission, California Department of Fish and Game, and/or U.S. Fish and Wildlife Service, as appropriate) for guidance, and additional measures, such as transplanting, or seed or plant start collection and cultivation for restoration in a protected area, will be identified and implemented to ensure that the special status plant population is preserved.</p>	<p>additional mitigation measures, such as restoration. Implement the additional measures.</p>			
<p><b>Overlooks Project-Specific Mitigation Measure BIO-2 (modifies CLRDP EIR Project-Specific MM 4.4-1)</b></p>	<p>For Overlook sites D and E, the University will implement the following:</p> <ul style="list-style-type: none"> <li>• Prior to commencement of project activities, a qualified biologist will conduct a training session for all construction personnel. Such training will include: a description of the California red-legged frog and its habitat; the general requirements of the Endangered Species Act and avoidance of ESA penalties, the boundaries within which construction will be accomplished; and the specific measures to be implemented in conjunction with the Overlooks project to avoid take CRLF during construction. Each individual that will be working at the project site must undergo this training prior to beginning work at the project site.</li> <li>• Ground disturbing work will be limited to the period from April 15 through October 15. If work must continue after October 15, the Campus will request from USFWS, in writing, an extension, to conduct further ground-disturbing work.</li> <li>• Immediately prior to vegetation removal for each of the construction sites, a qualified biologist approved by the USFWS will perform a preconstruction survey for CRLF. Vegetation will be hand cleared, with a hand-carried chainsaw as needed, to a height of 3-6 inches, and the biologist will then repeat the pre-construction survey before any additional ground disturbance at each of the sites. If during pre-construction survey or during the course of construction CRLF are observed in an area that would be impacted, irrespective of whether the biologist is present, work will cease and the Campus will notify USFWS within one working day. Neither the biologist nor any other individual will handle a CRLF.</li> <li>• If no CRLF are identified within the work areas during preconstruction surveys, these areas will be surrounded with 3-foot-high, high grade nylon silt fencing with pre-attached wooden stakes every eight feet, buried 6 inches, to temporarily exclude frogs from the construction site. A cover-board (4 by 4-foot 1/2-inch square of plywood) shall be placed at approximately 100-foot intervals outside the exclusion fence, to provide predator protection for small animals that encounter the fence. Each cover-board shall be elevated approximately two inches using two attached six-</li> </ul>	<p>Provide training as specified</p> <p>Ensure CRLF training, biological monitoring coordination, stop work and avoidance requirements included in construction contract specifications</p> <p>Schedule construction as specified and include schedule restrictions in project specifications..</p> <p>Conduct surveys as specified and monitor vegetation removal</p> <p>If CRLF detected, consult with USFWS to determine appropriate actions</p> <p>Ensure that contractor installs exclusion fencing and coverboards and maintains throughout construction</p>	<p>PP&amp;C/ PM/ Biologist</p> <p>PM</p> <p>PP&amp;C/ PM</p> <p>Biologist/ PM</p> <p>PP&amp;C/ Biologist/ PM</p> <p>PM/ Biologist</p>		<p>Work was performed by qualified biologists throughout construction and documented in biological monitoring report dated Feb. 2, 2013.</p>

**Public Coastal Access Overlooks Project: Mitigation Monitoring Checklist**

Measure #	Measure Text	Monitoring Procedure	Monitoring and Reporting Responsibility	Timing	Implementation (describe how and when measure was implemented, list relevant documentation in project file)
	<p>inch wooden blocks. The elevated edge of each cover-board shall be placed flush against the outside of the exclusion fence. The cover-boards will be labeled with signage to ensure they are not disturbed and each shall be regularly inspected by the biological monitor.</p> <ul style="list-style-type: none"> <li>• Prior to work activities each morning, the qualified biologist will inspect the integrity of the exclusion fencing and survey around and under construction equipment, materials stockpiles and other work area for CRLF. If no CRLF are observed, work may proceed.</li> <li>• Prior to or during construction, if a CRLF, or a frog believed to be a CRLF, is observed at an area that would be affected, work will cease and the qualified biologist will be notified immediately. Work in that area will cease and the animal will be avoided until it has safely left the area of its own accord. In addition, USFWS will be informed of the observation.</li> <li>• All trash will be removed from the site daily to avoid attracting potential predators to the site.</li> <li>• Additional avoidance, monitoring or other measures will be carried out if recommended by USFWS during any subsequent consultation.</li> </ul>	<p>Biologist to conduct inspections as specified</p> <p>Include requirement in project specifications. If frog observed, stop work, protect and observe CRLF, consult with USFWS as specified</p> <p>Include provision in construction contract specification and inspect regularly for compliance</p> <p>Consult with USFWS in event of discovery and impose additional requirements on project if recommended..</p>	<p>PM/ Biologist</p> <p>PM/ Biologist</p> <p>PP&amp;C PM</p> <p>PP&amp;C PM and Biologist</p>		
<p><b>Overlooks Project-Specific Mitigation Measure BIO-3</b></p>	<p>30 to 60 days prior to the start of construction, a biologist will conduct a pre-construction survey for woodrats. The survey will cover of all areas that will be subject to disturbance in the Overlook D and Overlook E development areas. If no active woodrat houses are found at the Overlook E site, no further mitigation is necessary at that location, as the area is small and the potential for undetected nests is limited.</p> <p>Irrespective of whether a nest is found at the Overlook D site during the initial survey, a biological monitor will be present during hand-removal of vegetation at this site, and will direct crews to avoid any houses discovered in the dense cover.</p> <p>If active woodrat houses are found and they can be avoided, an exclusion zone shall be erected, using a temporary fence that does not inhibit the natural movements of wildlife (such as steel T-posts and a single strand of yellow rope or similar materials).</p> <p>If woodrats will be affected by construction and relocation is necessary, biologist and campus will contact CDFG for approval to live-trap and relocate individuals and create one artificial house for each one lost.</p>	<p>Ensure that survey of development footprint is conducted as specified, for sites D and E. I</p> <p>Include woodrat protection measures in construction contract specifications</p> <p>Ensure that biologist is present during hand removal of vegetation to identify nests and alert crews to avoid</p> <p>If nests can be protected in place, ensure exclusion fencing is erected and nests protected throughout construction at Overlook D site.</p> <p>Conduct CDFG consultation as required and live trap and relocate individuals as specified</p>	<p>PM/ Biologist</p> <p>PM</p> <p>PM/ Biologist</p> <p>PM/ Biologist</p> <p>PP&amp;C/ PM/ Biologist</p>		<p>Work was performed by qualified biologists throughout construction and documented in biological monitoring report dated Feb. 2, 2013.</p>
<p><b>Overlooks Project-Specific Mitigation Measure</b></p>	<p>UCSC shall ensure that construction activities avoid disturbing nests of <del>raptors</del> special status and non-listed native birds. <u>If feasible, project construction will be scheduled to occur outside of the nesting season.</u></p>	<p>Schedule construction outside of nesting season if feasible.</p> <p>Include potential buffering restrictions in</p>	<p>PM</p> <p>PM</p>	<p>During project schedule planning</p> <p>Prior to issuing</p>	<p>Work was scheduled outside nesting season</p>

**Public Coastal Access Overlooks Project: Mitigation Monitoring Checklist**

Measure #	Measure Text	Monitoring Procedure	Monitoring and Reporting Responsibility	Timing	Implementation (describe how and when measure was implemented, list relevant documentation in project file)
<b>BIO-4</b> (modifies CLRDP Project-Specific Mitigation Measure 4.4-2 to include all native nesting birds)	<p>If ground-disturbing activities are scheduled to occur during the breeding season (February 1 through August 31), the following measures <del>are required</del> <u>will be implemented</u> to avoid potential adverse effects on nesting special-status raptors and other birds:</p> <p>A qualified wildlife biologist will conduct preconstruction surveys of all potential nesting habitat <u>within 300 feet of each work area, within 14 days prior to the start of construction at each site.</u> <del>For burrowing owls, such surveys will follow the most recent CDFG Burrowing Owl Survey Protocol and Mitigation Guidelines.</del></p> <p>If active <u>avian raptor</u> nests are found during preconstruction surveys, <u>the project biologist will consult with the California Department of Fish and Game (CDFG) to determine an appropriate buffer radius based on site conditions and species potentially affected, and a no-disturbance buffer acceptable in size to CDFG will be created around active raptor nests and nests to protect nesting adults and their young from construction disturbance of any other special-status birds during the breeding season, and maintained until it is determined the project biologist determines that all young have fledged.</u></p> <p><del>Raptor or other</del> Bird nests initiated during construction are presumed to be unaffected, and no buffer is necessary. However, the “take” of any individuals will be prohibited.</p> <p>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>	<p>construction contract specifications</p> <p>Conduct survey. Document results.</p> <p>If active nests are found, consult with qualified biologist and CDFG to establish size of no-disturbance buffer.</p> <p>Establish, protect and maintain buffer</p>	<p>PM/ Biologist</p> <p>PM/ Biologist</p> <p>PM, biologist</p>	<p>construction contract</p> <p>At least 14 days prior to construction</p> <p>Before beginning construction</p> <p>From pre-construction, throughout construction until nests are vacated</p>	
<b>Cultural Resources</b>					
<b>CLRDP IM 3.9.1</b>	<p><b>Cultural Resources Construction Monitoring:</b> Should archaeological and/or paleontological resources be encountered during any construction on the Marine Science Campus, all activity that could damage or destroy these resources shall be temporarily suspended until qualified archaeologist/ paleontologist and Native American representatives have examined the site and mitigation measures have been developed that address and proportionately offset the impacts of the project on archaeological and/or paleontological resources. Development shall incorporate measures to address issues and impacts identified through any archaeologist/ paleontologist and/ or Native American consultation.</p>	<p>Include in construction contract specifications the requirement that work be suspended if archaeological resources are disclosed.</p> <p>In the event of a discovery, contract with qualified archaeologist/ Native American consultant/ paleontologist to develop and implement appropriate mitigation measures.</p>	<p>PM</p> <p>PP&amp;C</p>	<p>Before issuing contract</p> <p>Immediately upon a discovery</p>	<p>Included in contract documents. No discovery during construction. Section 01100, 1.02A.</p>
<b>CLRDP EIR Project-Specific Mitigation Measure 4.5-1</b>	<p><b>Human Remains:</b> 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</p>	<p>Include requirement in construction contract specifications to notify UCSC upon construction discovery of suspected human bone.</p> <p>Contact archaeologist and County Coroner in the event of discovery of suspected human bone. Contact</p>	<p>PP&amp;C PM</p> <p>PP&amp;C PM</p>	<p>Before issuing construction contract</p> <p>Throughout construction</p>	<p>Included in contract documents. Section 01100, 1.02B.</p>

**Public Coastal Access Overlooks Project: Mitigation Monitoring Checklist**

Measure #	Measure Text	Monitoring Procedure	Monitoring and Reporting Responsibility	Timing	Implementation (describe how and when measure was implemented, list relevant documentation in project file)
	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.	California Native American Heritage Commission and conduct Native American consultation if Coroner determines the remains are Native American.			
<b>Hazardous Materials</b>					
<b>CLRDP IM 3.10.1</b>	<b>Use, Containment and Cleanup of Hazardous Materials.</b> 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.	Specify USCS hazardous materials handling, protection and cleanup provisions in construction contract  Monitor implementation during construction	PM  PM	Prior to issuing construction contract  Throughout construction	Included in contract documents. No hazardous materials observed. Section 01100, 1.03.
<b>Hydrology and Water Quality</b>					
<b>CLRDP IM 7.1.1</b>	<b>Management of Stormwater and Other Runoff.</b> The stormwater and other runoff drainage system on the Marine Science Campus shall be sited and designed using a combination of good site planning, source control, and filtration/treatment best management practices (including engineered storm water treatment systems) to achieve water quality objectives, as detailed in the Drainage Concept Plan (Appendix B). Low Impact Development (LID) BMP strategies and techniques shall be used in all system design (e.g., maximizing infiltration in BMP design, reducing the hydraulic connectivity of impervious surfaces, etc.). The drainage system shall be designed to filter and treat (i.e., to remove typical and expected urban runoff pollutants) all site runoff prior to its use for on-site habitat enhancement, infiltration, and/or landscape irrigation, and/or prior to its discharge otherwise. The drainage system shall be sized to accommodate the volume of runoff produced from all applied water (such as for 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. Drainage shall be directed to vegetated stormwater basins through vegetated filter strips and swales to further improve water quality prior to its discharge to receiving areas. The drainage system for equipment/vehicle use areas (i.e., parking lots, maintenance and laydown areas, etc.) shall also include engineered treatment systems and/or equivalent systems designed to filter and treat contaminants expected to be present in the runoff relating to the specific type of equipment/vehicle use.	Confirm that project specifications include LID elements and BMP measures as noted in project description	PM	Prior to issuing construction contract	Project included storm water runoff and site infiltration elements.
<b>CLRDP IM 7.1.13</b>	<b>Permeable Hardscape.</b> Hardscape development (such as roads, parking areas, paths, patios, etc.), where appropriate for water quality protection purposes, shall include permeable materials (e.g., permeable pavement/concrete, turfblock, etc.) to maximize infiltration. At a minimum, all parking areas shall be surfaced with porous/permeable materials.	Specify the use of permeable materials for platform and trail surfacing in construction contract specifications	PM	Prior to issuing construction contract	Permeable material was used.
<b>Noise</b>					

**Public Coastal Access Overlooks Project: Mitigation Monitoring Checklist**

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<p><b>CLRDP EIR Project-Specific Mitigation Measure 4.11-4</b></p>	<p>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"> <li>• 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"> <li>○ 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).</li> <li>○ 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.</li> <li>○ 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.</li> </ul> </li> <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.                             <ul style="list-style-type: none"> <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> <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> <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> <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</li> </ul> </li> </ul>	<p>Include requirement for approved noise mitigation program, with relevant specifications below at minimum, in construction contract specifications</p> <p>Monitor construction to ensure that specifications are implemented</p>	<p>PM</p> <p>PM</p>	<p>Prior to issuing construction contract</p> <p>Throughout construction</p>	<p>Construction documents included the requirements of noise mitigations and low noise equipment and the contractor maintained that equipment throughout the construction. Section 01500, 1.11B.</p>

**Public Coastal Access Overlooks Project: Mitigation Monitoring Checklist**

Measure #	Measure Text	Monitoring Procedure	Monitoring and Reporting Responsibility	Timing	Implementation (describe how and when measure was implemented, list relevant documentation in project file)
	<p>within temporary sheds.</p> <ul style="list-style-type: none"> <li>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.</li> <li>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.</li> <li>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.</li> </ul>				
<b>Overlooks Project-Specific Mitigation NOIS-1</b>	<p>The least noisy construction equipment capable of carrying out the required work will be used for brush clearing, grading and excavation necessary for construction of overlooks A, D and E. Smaller and efficiently-muffled equipment will be used whenever feasible. In addition, work shall be done in a fashion that minimizes the number of times noisy equipment must be started up and the duration of operation of noisy construction equipment.</p>	<p>Contract specifications will include requirements for contractor to identify least noisy equipment in his bid and to operate it as specified in the mitigation measure.</p> <p>Campus inspector will confirm that specified equipment is used and that its use is minimized to the extent possible.</p>	<p>PP&amp;C and PM</p> <p>PM</p>	<p>Prior to contract award and throughout construction.</p>	<p>Construction documents included the requirements of noise mitigations and low noise equipment and the contractor maintained that equipment throughout the construction. Section 01500, 1.11B.</p>